

Sustainable Disaster Recovery & Natural Hazards Mitigation: The Need for Paradigm Shifts

Jean Slick

Associate Professor, Disaster & Emergency Management

Director, School of Humanitarian Studies

Royal Roads University

jean.slick@royalroads.ca

Education & Professionalization in the Disaster & Emergency Management Field

- 50+ year of social science research about human experience with disasters, including the practice of disaster and emergency management
- A motive for development of the post-secondary programs in the DEM field has been that what is known is often not being applied
- Certified Emergency Manager requirements now include the requirement for a degree
- None of this negates the need for experience, rather there is a need to integrate the body of knowledge of what is empirically known into professional practice

Shifting Paradigms



1. Disaster narratives – the social construction of disasters
2. Emergence and organized response – planning for what happens
3. Hazard and response/recovery generated demands/needs – socio-cultural factors influencing recovery needs and outcomes
4. Disasters as focusing events – factors influencing change following disaster events

Shifting Paradigms: Disaster Narratives



Historical proposition:

Natural disasters are acts of God – a divine agent



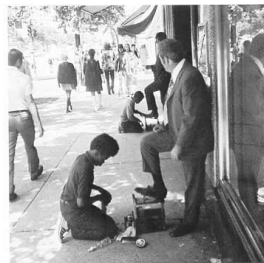
Alternative proposition:

Natural disasters are acts of nature – a physical agent



Antithesis of natural disasters: 'Disasters by Design' (Miletti, 1999)

Disasters are the “consequence of prior decisions that put people and property at risk” (p. 170) and that reflect the inter-relationship of political, economic, social, and environmental systems (National Research Council, 2006).



Shifting Paradigms: From managing response to reducing risk



<http://news.discovery.com/human/disaster-relief-contrasting-haiti-and-japan-.html>

We can improve response, and this is a good thing. But improved response does not on its own reduce the impact of hazards on societies.

Shifting Paradigms: Roles & Responsibilities



Historically, disasters were mostly dealt with at a local level. Response and recovery was done by the affected populations, with assistance from family and community, including church and civic organizations.



Government was only marginally involved. No expectation of federal government disaster assistance, to individuals and families, or for public infrastructure.

Formal organized response:

Domain>Tasks>Resources>Activities



Collective pro-social behaviours:

Activities>Resources>Tasks>Domain

Organized Response & Collective Behaviour

- Domain: a recognized entity with a specific purpose
- Tasks: clarity within an entity of division of labour
- Resources: both human and material
- Activities: conjoined individual and collective actions directed towards a shared goal

DRC Organizational Typology: Foundation of the Need for Collaboration

Tasks: Regular

Structure:
old

| | |
|---|--|
| Type 1: Established CEMA AEMA Town of Banff MD of Bighorn No. 8 CAF | Type 2: Expanding Red Cross Samaritan's Purse "affiliated volunteers" |
| Type 3: Extending Walmart Rotary ATCO firefighters "convergent groups" | Type 4: Emergent Neighbours helping neighbours Crisis commons "unaffiliated volunteers" |

Structure:
new

Tasks: Non-regular

Hazard Generated Demands/Needs

Response/Recovery Generated Demands/Needs

warning

evacuation

sheltering

debris mgmt

rebuilding

restoration

health

psychosocial



situational awareness

information needs

human resource needs

volunteer coordination

logistics needs

donation management

communication needs

coordination needs



<http://www.cbc.ca/news/canada/british-columbia/story/2009/08/04/bc-fire.html>



Socio-cultural factors that influence differences in recovery outcomes

Pre-existing physical and social vulnerability; coping capacities

Principles of responsibility

- Individuals/households
- Civil society
- Governments: local, provincial/territorial, federal

Risk transfer mechanisms - differences between hazards

Insurance

Disaster financial assistance

Disaster Recovery Outcomes

the “*back to normal*” syndrome

Sustainable Disaster Recovery Outcomes

build back ~~better~~ safer



Sustainable & Holistic Disaster Recovery

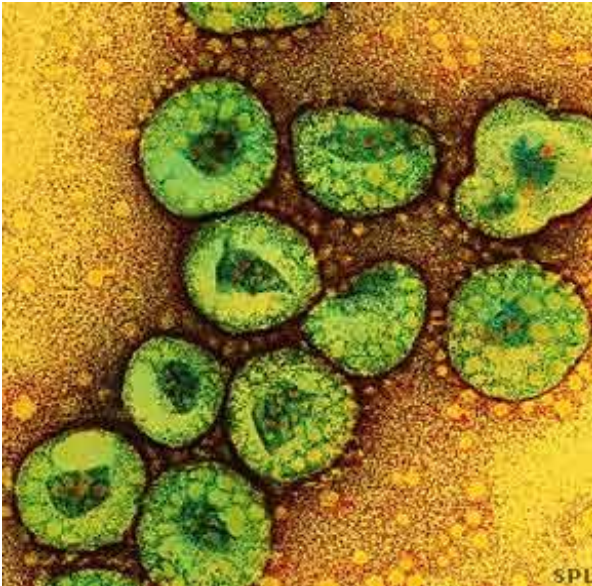
- Environmental quality
- Social and intergenerational equity
- Quality of life
- Disaster resilience, includes hazard mitigation
- Economic vitality

- Participatory processes

Disasters as Focusing Events



The [Emergency Public Warning System](#) was developed as a result of the 1987 Edmonton Tornado Disaster.

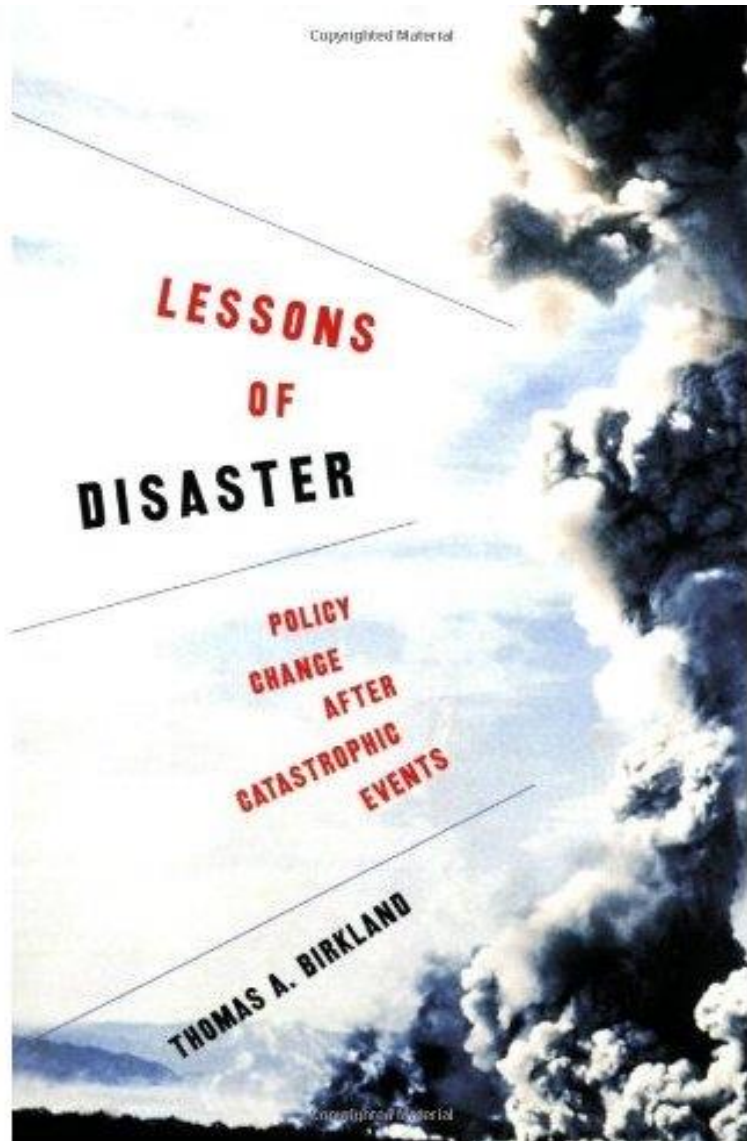


The Public Health Agency of Canada (PHAC) was created in 2004 following the SARS crisis.

Emergency Management: The American Experience 1900-2005



Claire B. Rubin, Editor



Rubin's (2007)
Approach:

Large Magnitude
High Visibility
High Impact
Surprise
Unique Threat Agent
Unusual Location
Received a
Presidential Disaster
Declaration
(or eligible for one)

Birkland's (2006)
Approach:

Large
Increase in attention
Impact & consequence
Sudden

Impacts of Focusing Events

Rubin (2007)

- A few of focusing events led to ***gradual*** changes at the national level including an increasing involvement by the federal government.
- More typically, policies, legislation, programs, systems, and organizations have been developed ***quickly*** in reaction to one or more focusing events.

Birkland's (2006) findings

- “new ideas are not developed in response to an event. Instead, focusing events tend to invigorate attention to existing ideas.” (p. 165)
- “very few problems are entirely new... nor are there many, if any, truly novel events in the natural hazards domain” (p. 166)
- “because there are few entirely new problems, focusing events cause pre-existing policy ideas to be revamped. Rather than spur innovation, disasters allow proponents of particular policy options to advance their ideas, usually at the expense of other ideas” (p. 167)

Challenges to learning from focusing events

(Birkland, 2006)

- “links between understanding of natural phenomenon, human adjustment to the phenomenon, and the improved policies are not as clear as they could be” (p. 169)
- “perceived ability of policy to do much about a hazard (the ‘act of God’ problem) and the perceived low salience of the issues amongst most local officials” (pp. 169-170)
- “small events will lead to the discussion of a narrow range of issues”
- “learning in the natural hazards domain accumulates over time from many events” (p. 167)

Learning from small disasters

- Voss and Wagner (2010) examine “if and how learning from ‘small’ disasters can help reduce the probability and occurrence of, or the destruction resulting from ‘large’ disasters.

Improved Learning Process

Voss & Wagner (2010)

1. Constellation analysis: participatory multi-stakeholder processes to examine human and non-human factors related to the event – with a focus on the inherent connection between these factors and possible interventions.
2. Aggregate these analyses on a supra-regional level to feed information into the political process.