

The Planning Profession's Role in Hazard Mitigation

Time to start doing it right

Jack Lindsay

Why Plan?

- The answer is in news headlines about communities impacted by wildfires, floods, train derailments and a range of other disasters.
- The real question is **why we don't plan for community safety and wellbeing** when it is a fundamental purpose of our profession and we control the tools to make a difference.

Today's Discussion

- Why are we all here and what do we want to accomplish?
- Sharing an understanding of common concepts.
- How (and why) should planners be part of their community's hazard mitigation activities?
- *And if there's time...* how do planning and hazard mitigation theories fit together.

Two outcomes of this talk

Stick: case for hazard mitigation **Carrot: tools for improvement**

- Why should planners get involved in hazards?
 - Is this really our profession's problem?
 - Isn't someone else doing this work already?
- How can a planner get involved?
 - What can a planner do to help reduce risks in our communities?
 - How do we engage our emergency management partners?

Why are *you* here?

- Your reason for choosing this session over the others will influence how you ‘hear’ this presentation.
 - Are you looking to be convinced that planners have a role in reducing natural and technological risks in our communities?
 - Are you wanting ideas on how to achieve better integration between planning and hazard management?



What are your
questions?

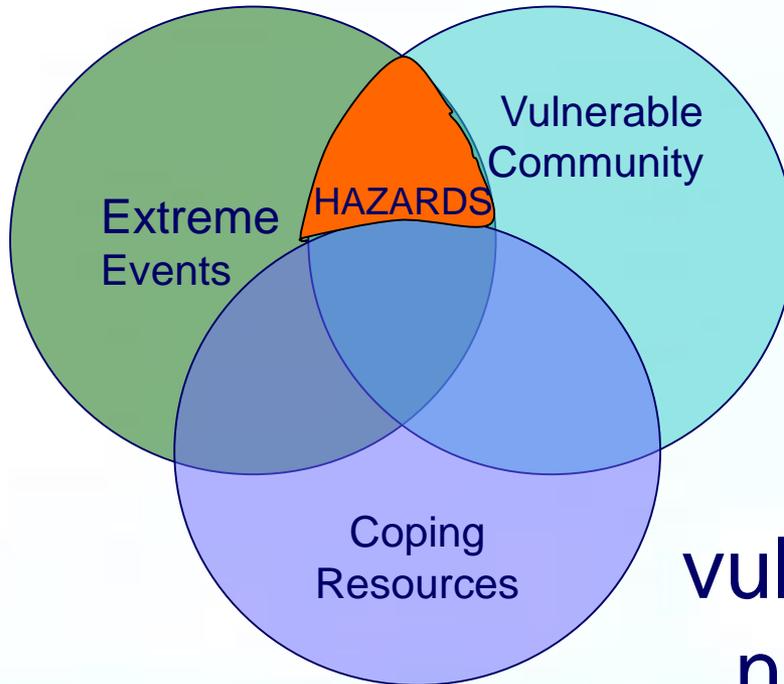
Common Concepts

- One hurdle to overcome when discussing how to prevent or reduce the harm from a hazard impact is the myth that hazards/disasters just happen *to* a community.
- By breaking the ideas of hazards and disasters down and looking at their components it becomes easier to see how planning can fit into their management.

Understanding Disasters



Understanding Hazards



Hazards are those interactions between extreme events and vulnerable communities not covered by normal coping resources.

Vulnerability

“a product of the circumstances that put people and property on a collision course with given dangers, or that make them less able to withstand or cope with disaster.”

Hewitt, K. 1997. *Regions of Risk*. Essex: Longman p167

Nationally Agreed Concepts

- Prevention and Mitigation “to eliminate or reduce the impacts and risks of hazards through pro-active measures taken before an emergency or disaster occurs”
- Risk “The combination of the likelihood and the consequence of a specified hazard being realized.”
- All-Hazards “By assessing the risks associated with all hazards in an integrated way, efforts may be broadly effective in reducing the vulnerability of people, property, the environment and the economy.”
 - Ministers Responsible for Emergency Management (2011) *An Emergency Management Framework for Canada*. Ottawa: Public Safety Canada

Does planning have a role in Hazard Mitigation?

- Helping our community achieve their goals and aspirations is fundamental to why we engage in 'planning'.
- Planners have the relationships and processes to facilitate community decision-making.
- Planning legislation provides the tools to manage the interactions between our natural, built and socio-economic environments... the interactions that generate risk.

“A cornerstone of community planning is that it aims to promote the public interest when coping with the various problems affecting the physical environment.”

Hodge, G. 1986. *Planning Canadian Communities*. Toronto: Methuen. p.7

Should planners be part of Hazard Mitigation?

1.1 Protecting People, Property and Investment

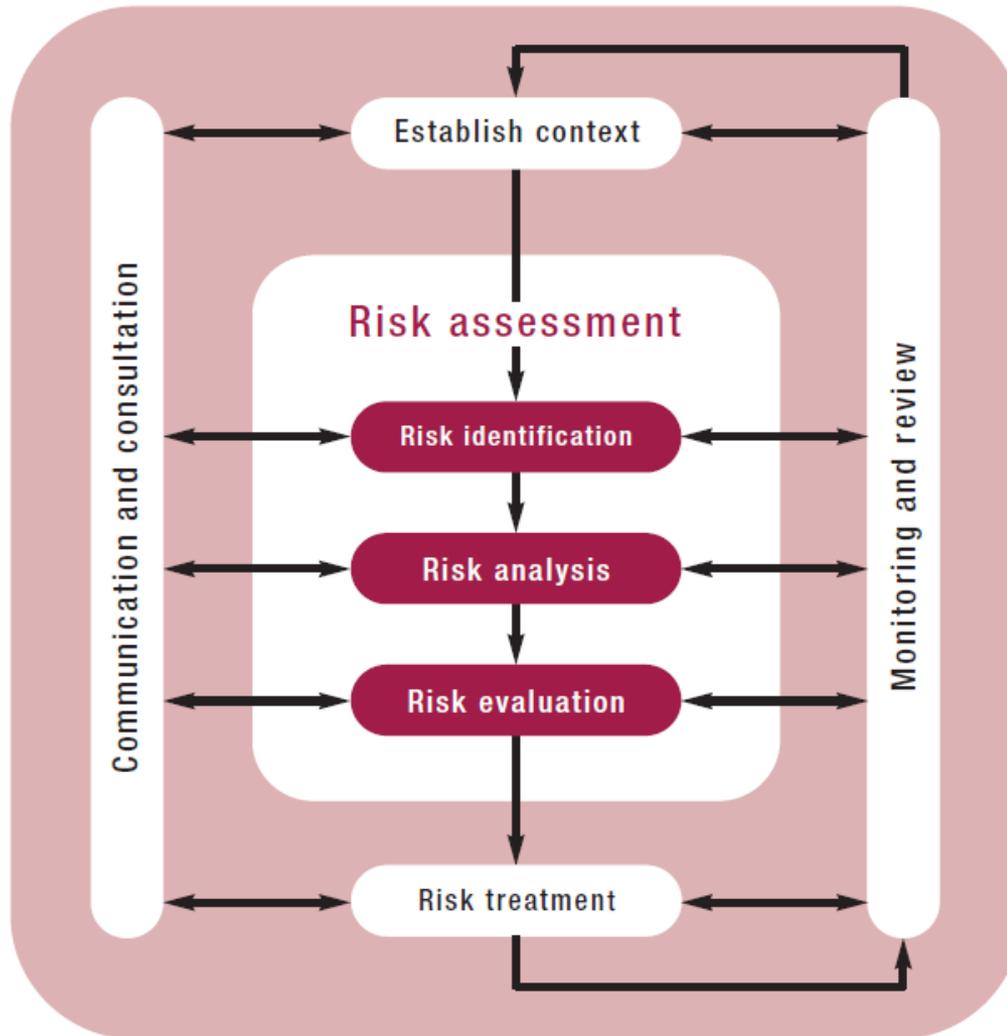
- To avoid and mitigate risks to people, property and investments from hazards and nuisances.
- To anticipate change and undertake the necessary planning and measures needed to adapt.

Planning Regulations R.M 81/2011 Schedule, Part 3, pgs. 10-11

What's the process?

- Hazard mitigation measures must be designed using a risk-based approach that “emphasizes the importance of assessing vulnerability to all hazards in order to determine the optimal balance and integration of measures to address vulnerabilities and risks.”
- So first we need to assess our risks, then we can develop and implement mitigation options.

Risk Management Framework



Risk treatments that deal with negative consequences are sometimes referred to as “risk mitigation”, “risk elimination”, “risk prevention” and “risk reduction”

ISO 31000:2009, *Risk management – Principles and guidelines*

Involving Your Community in Hazard Assessment

- Ask your community's emergency preparedness coordinator for their hazard, vulnerability and risk assessment.
- Don't be surprised if they don't have one... Manitoba's Emergency Measures legislation doesn't require local authorities to conduct hazard assessments.

Involving Yourself in Risk Assessment

- Offer to help develop your community's hazard, vulnerability and risk assessment.
- Use your stakeholder contacts and your skills in public engagement and consultation to support a community-base risk assessment.
- Incorporate an all-hazard risk assessment into your development plan, zoning bylaw, and development & building permit processes.

“Land-use planning is the means for gathering and analyzing information about the suitability for development of land exposed to natural hazards, so that the limitations of hazard-prone areas are understood by citizens, potential investors, and government officials.”

Burby, R. J., Deyle, R. E., Godschalk, D. R., & Olshansky, R. B. (2000). Creating hazard resilient communities through land-use planning. *Natural hazards review*, 1(2), 99-106.

Involving planning in mitigation

- There is a robust body of academic literature, published in both the planning and the disaster studies journals, connecting land-use regulation (especially zoning and building codes) to risk treatment.
- **Is this all planning has to offer?** Is a zoning map the only tool a planner has to influence decisions in their community?

Risk treatment, the process to modify risk, can involve:

- avoiding the risk by deciding not to start or continue with the activity that gives rise to the risk;
- taking or increasing risk in order to pursue an opportunity;
- removing the risk source;
- changing the likelihood;
- changing the consequences;
- sharing the risk with another party or parties (including contracts and risk financing); and
- retaining the risk by informed decision.

ISO 31000:2009, *Risk management – Principles and guidelines*

Involving Yourself in Hazard Mitigation

- Planning professionals are involved in or can influence a multitude of community decisions
 - economic policies, infrastructure spending, housing, culture and tourism, environmental protection etc.
- Each of these decisions will have direct or indirect repercussions for community risk.
- Risk reduction doesn't need to be an onerous obligation – it can be another selling point.

“It is critical that planners perceive the centrality of their role in [hazard mitigation] and use their talents to the maximum benefit of public health and safety.”

Schwab, J.C. and K. C. Topping (2010) “Hazard Mitigation: An Essential Role for Planners” in *Hazard Mitigation: Integrating Best Practices into Planning*. Chicago: American Planning Association

Why Start Now?

- The call for applying planning to resolve hazards dates back decades so its not a radically new or unproven idea. We just need to start doing it!
- Reactive hazard mitigation, following an impact, has a short 'window of opportunity' to get initial support and a long time horizon to see its benefits reach their full potential.
- Retroactive mitigation to alter past decisions takes even longer to achieve.

“The basic problem in human adjustment to floods is one of land-use planning, of determining the most economic use of flood-plain land. ... The land-use planner may be of direct aid in working out programs to reduce flood stages”

White, G. F. (1937). Notes on flood protection and land-use planning. *The Planners' Journal*, 3(3), 57-61.



What are your
questions?

What's just off our screen?



Thank You

Jack Lindsay

Associate Professor and Chair

Applied Disaster and Emergency Studies

Brandon University

270 18th St Brandon MB R7A 6A9

(204) 571-8555 w

lindsayj@brandonu.ca