

Resiliency efforts from a community of practice

Tuesday July 17th, 2018



2018 Flooding at Darlings Island, N.B. ([The Globe and Mail, May 3rd, 2018](#)) LEFT
2018 Flooding in Grand Forks, B.C. ([News 1130, May 13th 2018](#)) RIGHT



CCRF

Canadian Coastal Resilience Forum

Presented by: Andrea Minano

ABOUT US

- CCRF is a MEOPAR Community of Practice
- Our objective is to connect research to practice
- Knowledge mobilization and dissemination about the governance of coastal hazards and social resilience to climate change
- Advisor to Canada's National Flood Risk Roundtable



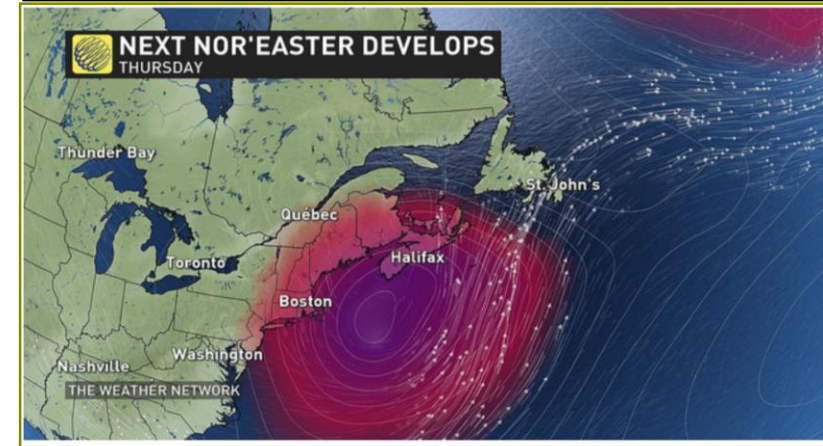
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SEA CHANGE

Halifax's battle of the rising sea: Will the city be ready for future floods and storms?

The deluges Nova Scotians faced during 2003's Hurricane Juan could be commonplace within decades – but the provincial capital has barely begun to prepare. In the first of a series on Canadian communities and climate change, **Matthew McClearn** visits the front line of Halifax's war with the ocean



Sources: Globe and Mail and The Weather Network



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ENGAGEMENT STRATEGY

Online

- Blog posts
- Newsletters
- Webinars
- Daily Tweets
- Online resources library

In-person

- Meet-ups
- Multi-stakeholder events

Event in Halifax, NS



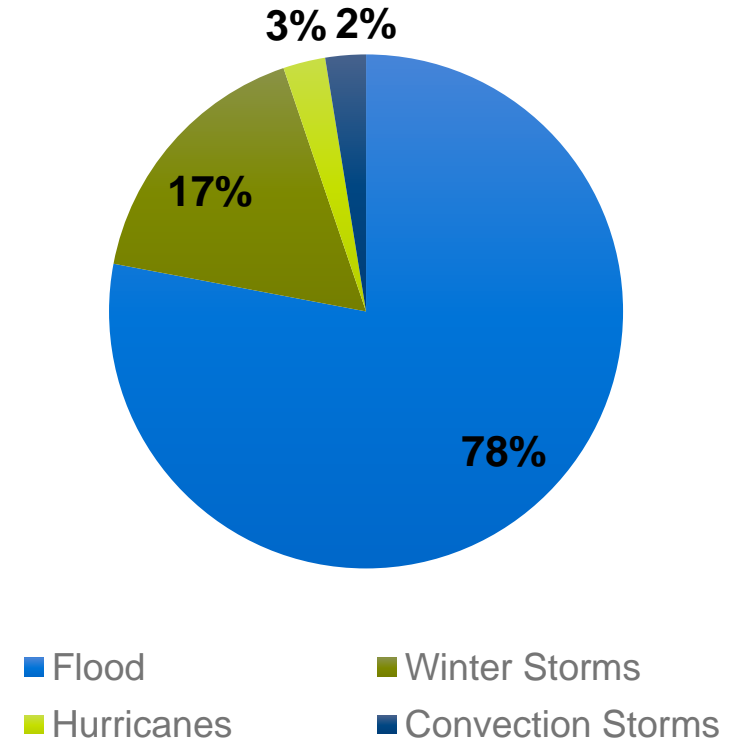
THE FLOOD PROBLEM

- Canada's most costly and common natural hazard
- Increasing flood-related costs for governments

Current impacts on Canadians

- High risk properties are uninsurable
- Public unaware about flood risk
- Ad-hoc government responses post-flood

Historical DFAA Payments by Catastrophe 1970-2014



(PBO 2016)



WORKSHOP: FLOOD RISK MANAGEMENT

Purpose of event

- Discuss policy instruments for reducing and managing flood risk in Nova Scotia
- Roles and responsibilities across governance scales

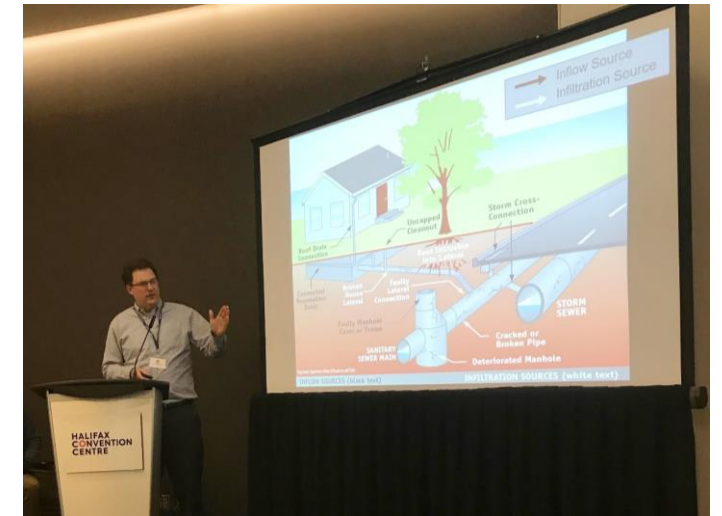
Targeted stakeholder engagement

- 3 levels of government, insurers, non-profit groups, academia, First Nations, consulting sector
- Various disciplines and professions

Presentations and facilitated group discussions



Craig Stewart, Insurance Bureau of Canada

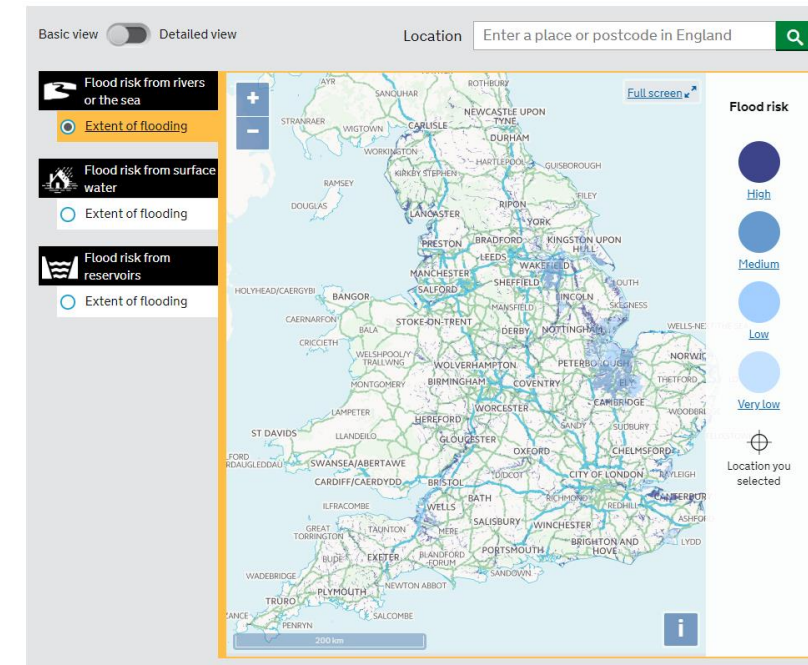


Dan Sandink, Institute for Catastrophic Loss Reduction



WORKSHOP DISCUSSION

- 4 round table discussions, 29 participants
- 4 policy instruments for managing flood risk in Nova Scotia
 - Property disclosure
 - Development setbacks
 - Managed retreat
 - Public flood maps
- *What are the benefits and drawbacks of these policy instruments? What should be considered when developing this policy?*



England's public flood risk portal



PROPERTY DISCLOSURE

Property owners disclose flood risks to potential buyers at the point of sale of a property.

Benefits	Drawbacks	Considerations
<ul style="list-style-type: none">• Ability for buyers to make an informed choice• Encourage property-level flood mitigation (reduce costs for gov't)• Fairness to disclose if risk is known• Likely to have support from elected officials (“greater good is public safety”)	<ul style="list-style-type: none">• Cost of disclosure could be significant to a home seller (especially for those selling when policy is implemented)• Not a solution for renters	<ul style="list-style-type: none">• Mandatory education and training for real estate professionals• Need for public understanding of the meaning of flood zones• Floods are only 1 of many risks that could impact a property

DEVELOPMENT SETBACKS

Regulations specifying the minimum distance that development must be built from shorelines.

Benefits	Drawbacks	Considerations
<ul style="list-style-type: none">• An effective way to reduce flood risk• Socially and politically feasible for new builds. Horizontal and vertical setbacks are common tools in municipal planning• Could promote flood risk awareness	<ul style="list-style-type: none">• Not viable in established/entrenched rural coastal communities where development is no longer expanding• Data (including mapping) is not reliable enough to justify setbacks in all places	<ul style="list-style-type: none">• Cultural reluctance to accepting new regulations and rules on personal property• Accepting uncertainty when selecting a setback standard• “Whose responsibility?” – Province is unlikely to set setback standards neither they or the municipality can enforce

MANAGED RETREAT

Managed retreat is the relocation of property at risk from flooding or coastal erosion.

Benefits	Drawbacks	Considerations
<ul style="list-style-type: none">• Most effective measure to reduce flood risk	<ul style="list-style-type: none">• Practical but politically unpopular• Could negatively affect certain demographics	<ul style="list-style-type: none">• Terminology should be changed to “planned managed migration”• Re-zoning high risk areas as “non-conforming zone” pre-flood• Support “buyer beware”• Taxes on existing property to collect funds for relocation or buy-out

PUBLIC FLOOD MAPS

An online portal where flood maps and associated information are available for public use.

Benefits	Drawbacks	Considerations
<ul style="list-style-type: none">• Portal could change people's behaviour, make decisions to protect their property ("if your home is in this zone, call this number")• Create support for government decisions ("this is why you can't build there")• Less costly to implement than reactive responses to flood damages	<ul style="list-style-type: none">• Does not reduce flood risk on its own• Not everyone can use a flood portal or Internet	<ul style="list-style-type: none">• Provincial government should create this portal, standards for resulting maps• Raising awareness about portal existence• Federal government needed to fund initiative, updates• Crowdsourcing component (validate flood analysis with local knowledge)

CONCLUSIONS

- Each policy instrument has advantages and disadvantages
- Alignment of policy responses to manage flood risk
 - E.g., flood maps support property disclosure, managed retreat and setbacks
- Appetite for new solutions from stakeholders in Nova Scotia
 - Recognized the need for collaboration across governance to achieve those goals (e.g., funding capacity to incentivize action)



NEXT STEPS

- Workshop report with discussion findings, takeaways from presentations and panel discussions
 - Presenter slides available on our website: uwaterloo.ca/ccrf
- Partnership development
- New research projects
 - Assessment of availability and quality of publicly available flood maps in Canada
 - 3D visualization of climate change impacts in BC and Nova Scotia

CLIVE developed by SFU and UPEI



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UNIVERSITY



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THANK YOU



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