

# Flood Risk Governance in Canada



Foley Restoration via Twitter



Ashley Burke, CBC News

**2017 floods in Bradford, Ottawa-Gatineau**



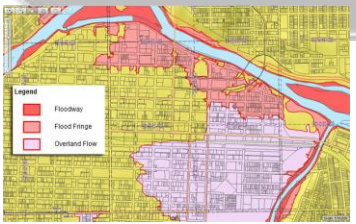
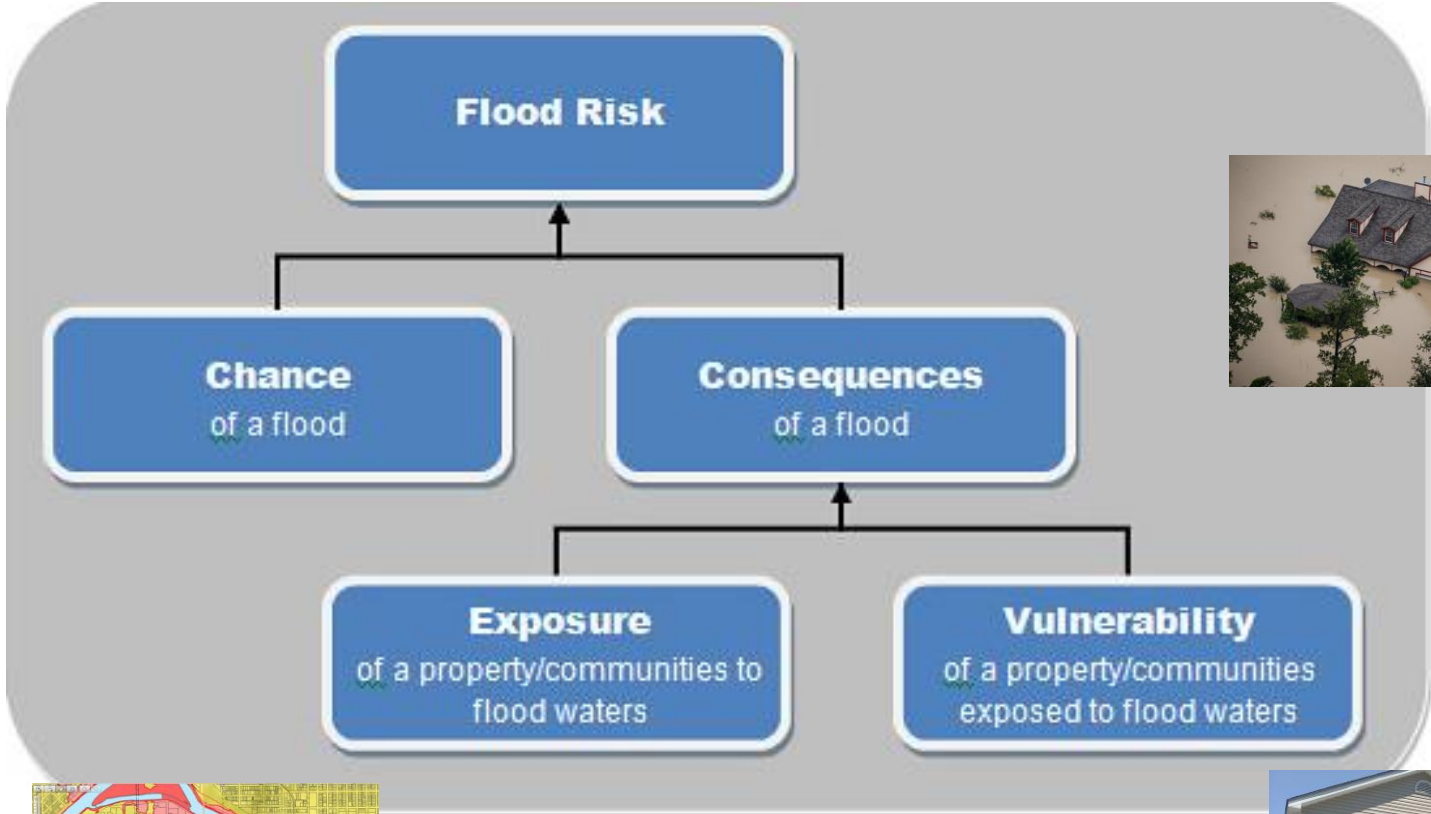
**CCRF**

Canadian Coastal Resilience Forum



UNIVERSITY OF  
**WATERLOO**

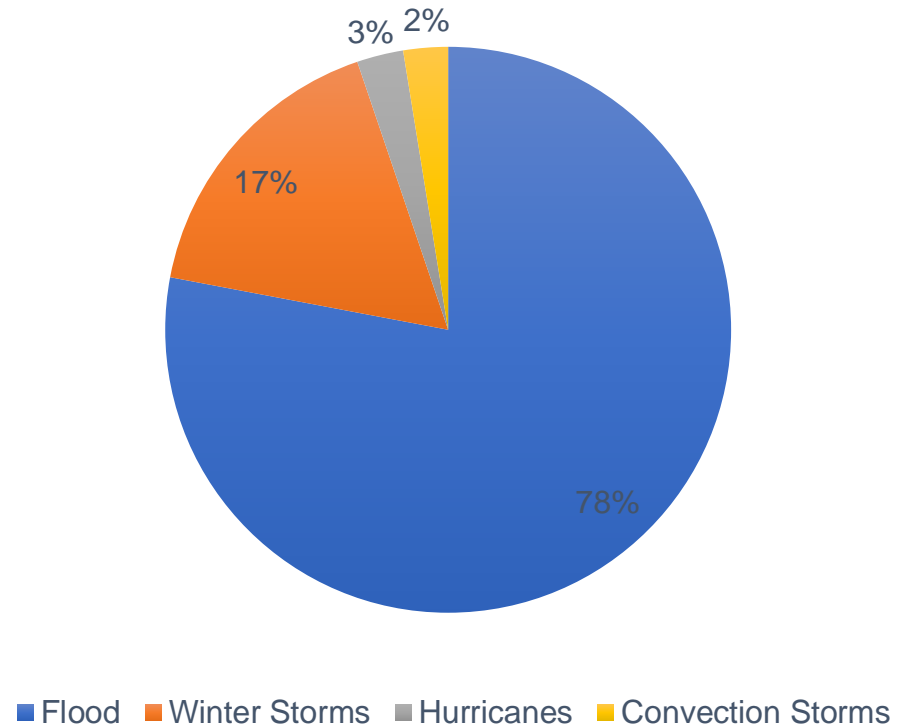
# Flood Risk



# Why Flood Risk?

- most costly and common hazard
- increasing disaster assistance / insurance costs
- outdated defenses
- legal liability growing

## Historical DFAA Payments by Catastrophe 1970-2014



(adapted from PBO 2016)

# Flood Risk Management

- **integrated strategy** to reduce flood risk by
  - engaging stakeholders
  - coordinating public and private efforts
  - using a mix of policy instruments



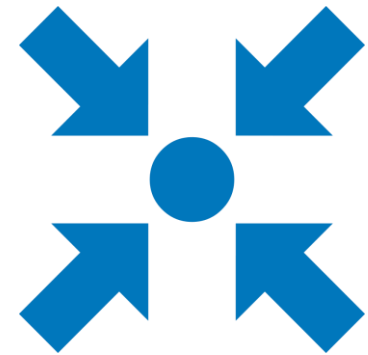
## Principles

- absolute protection is impossible
- informed by risk assessment
- clarify and share responsibility
- openly communicate flood risk



# Flood Risk Governance

- **policy coordination** to implement FRM
  - setting strategic goals
  - negotiating roles and responsibilities
  - aligning policy instruments
  - allocating resources

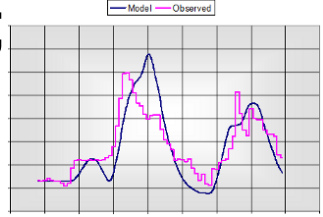


## Objectives

- strengthen societal flood **resilience**
- achieve **efficiency** of resources and alignment of efforts
- enhance the **legitimacy** of FRM

# Flood Risk Governance in Canada

- focused on defense and recovery
- instruments mainly technical (hydrologic modelling; river forecasting)
- government-dominated
- actors work at cross-purposes
- governments hesitant to share flood risk information
- property owners perceive little responsibility



# Thank you

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Policy Brief No. 116 – September 2017

## Flood Risk and Shared Responsibility in Canada: Operating on Flawed Assumptions?

Daniel Henstra and Jason Thistlethwaite

### Key Points

- Floods cause more property damage than any other hazard in Canada, and water-related losses now exceed fire and theft as the main source of property insurance claims.
- Public spending on flood relief has grown, and is projected to increase dramatically over the next decade, so governments have been changing their policies to reduce their financial exposure by shifting responsibility to homeowners.
- An implicit assumption of this policy shift is that individual homeowners must share greater responsibility for protecting their property by purchasing newly available flood insurance. Evidence is presented suggesting that consumer demand for flood insurance may be insufficient for economic viability. Low risk perception and a moral hazard created by government disaster assistance limit incentives for purchasing insurance.

### Introduction

Flooding is the most costly source of property damage in Canada, and has surpassed fire and theft as the principal source of property insurance claims (ICMG 2014; Oulahan 2014; Public Safety Canada 2015). Flood damage is expected to increase considerably in the future, as a result of expanding urban development and more frequent extreme weather triggered by climate change (Cherqui et al. 2013; Kvitkiewicz et al. 2014). Flooding is currently responsible for nearly 80 percent of all government disaster assistance costs, and it is projected that payments under the Disaster Financial Assistance Arrangements (DFAA) – a federal program that reimburses provinces and territories for a portion of disaster response and recovery costs – will top \$670 million annually in the coming years (Office of the Parliamentary Budget Officer (2010) 2015).

The federal and provincial governments have recognized their escalating financial liability and have begun to adjust flood management policies. Notable changes include higher exposure thresholds for federal disaster assistance, tightened guidelines for provincial disaster assistance, renewed public education efforts, and limiting for flood maps, risk assessments and small structural protection projects to mitigate flood damages. An implicit assumption of this policy shift is that individual homeowners must share greater responsibility for protecting their property

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Policy Brief No. 121 – December 2017

## Engaging Canadians in Flood Risk Management: Lessons from the International Community

Jason Thistlethwaite, Daniel Henstra, Andrea Minano and Sarah Wilkinson

### Key Points

- Flood risk management is most effective when responsibilities are defined and shared among stakeholders, and when citizens feel personal responsibility to reduce their flood risk.
- International experience shows that effective public engagement starts at the community level, but must be supported by accurate and locally relevant flood risk information.
- Canada needs a strategy to engage Canadians in flood risk management that involves educating them about personal and community flood risks and encouraging them to take responsibility to protect themselves and their property from floods.

### Introduction

In recent years, unprecedented flooding has caused billions of dollars in damages across Canada. The 2011 spring floods in British Columbia, Ontario, Quebec and the Maritimes served as a reminder that flooding is a national issue that deserves attention from governments, private stakeholders and the public (Bradley 2017; CBC 2014; Canadian Press 2017). These events revealed that Canadians are typically unaware of their flood risk and are caught off guard by the economic burden that flooding imposes. In eastern Ontario, for example, it was only after their properties were flooded that cottage owners discovered that damages to secondary residences are ineligible for financial compensation through the province's disaster assistance program (Fagan 2017). Similarly, after widespread basement flooding in Windsor, Ontario, 40 percent of affected homeowners were denied financial assistance, while another 40 percent of claims remain in limbo (CBC 2017b). Too often, property owners are left to pay out-of-pocket for repairs and restoration, which can amount to tens of thousands of dollars, depending on the severity of the damage and the value of the property and its contents (Beaby 2017).

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Policy Brief No. 131 – May 2018

## Buyer Beware: Evaluating Property Disclosure as a Tool to Support Flood Risk Management

Daniel Henstra and Jason Thistlethwaite

### Key Points

- Property disclosure offers a potential tool by which buyers could become informed about a home's history of flood damage and its exposure to future flood risk.
- Property disclosure to inform buyers about flood hazards has been entrenched in public policy in many other jurisdictions, but this approach has not been embraced in Canada.
- An effective flood risk property disclosure regime requires accurate, up-to-date and publicly available flood risk maps, clarification of legal liability associated with disclosures and a neutral third party to prepare and distribute property disclosure information.

### Introduction

Flood risk management is a strategic framework that involves modifying the probability and severity of flooding through preventive measures, while also reducing the vulnerability of people and property to flood-related impacts (Alexander, Priest and Mees 2016). In Canada, all levels of government have begun embracing risk assessment as the basis for setting protection priorities, combining multiple policy instruments to reduce flood risk (such as public education, warning systems and so on) and sharing the responsibility for flood protection and recovery with businesses and individuals. These policy promises reflect a key principle of flood risk management: strict absolute protection from flooding is impossible, stakeholders (including individual property owners) must accept some responsibility by, for example, knowing their flood risk, subscribing to and heeding flood warnings, and adopting property-level flood protection measures (Sayers et al. 2015).

In order for individual property owners to play a meaningful role, they must be made aware of their property's flood risk and accept that they have a role in managing it. Improving public awareness of flood risk is an important step toward meeting Canada's commitment to the Sendai Framework on Disaster Risk Reduction. This 2015 international agreement identified "understanding disaster risk" as its first priority for signatories, arguing that "policies and practices for disaster risk management should be based on an understanding of disaster risk in all

