

Canada's adaptation leadership deficit

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2017 floods in Bradford, Ottawa-Gatineau



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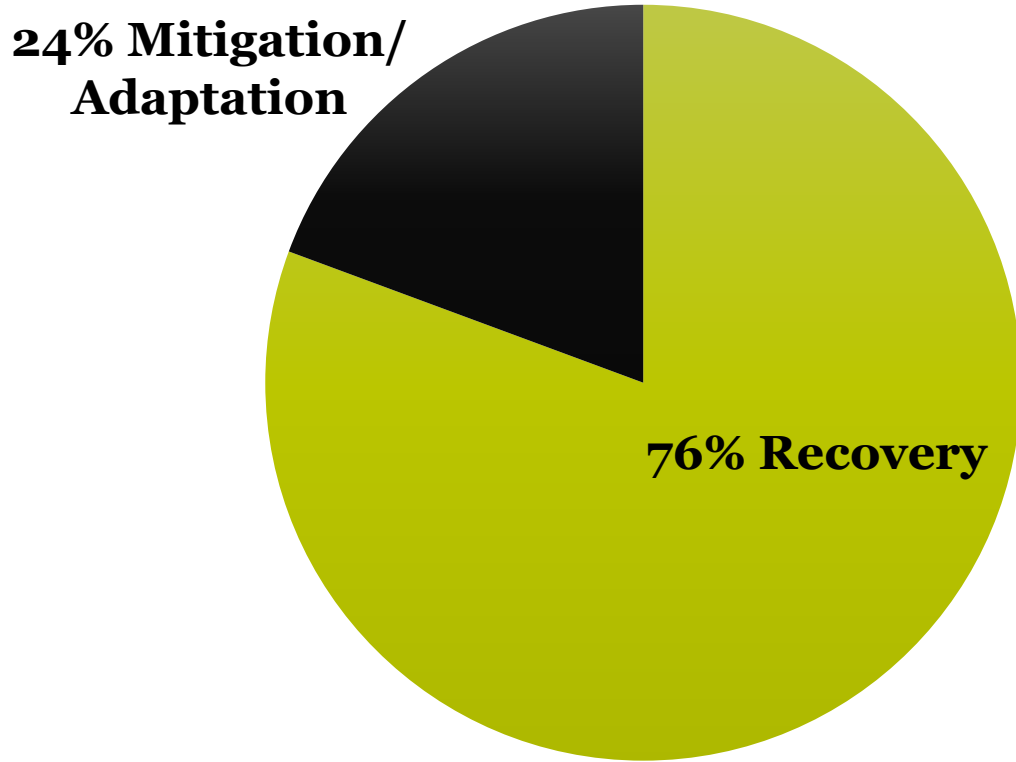
OUTLINE

1. The political economy of climate risk
2. What are the lessons from existing disaster reduction strategy for adaptation
3. How risk information and better governance can improve adaptation politics

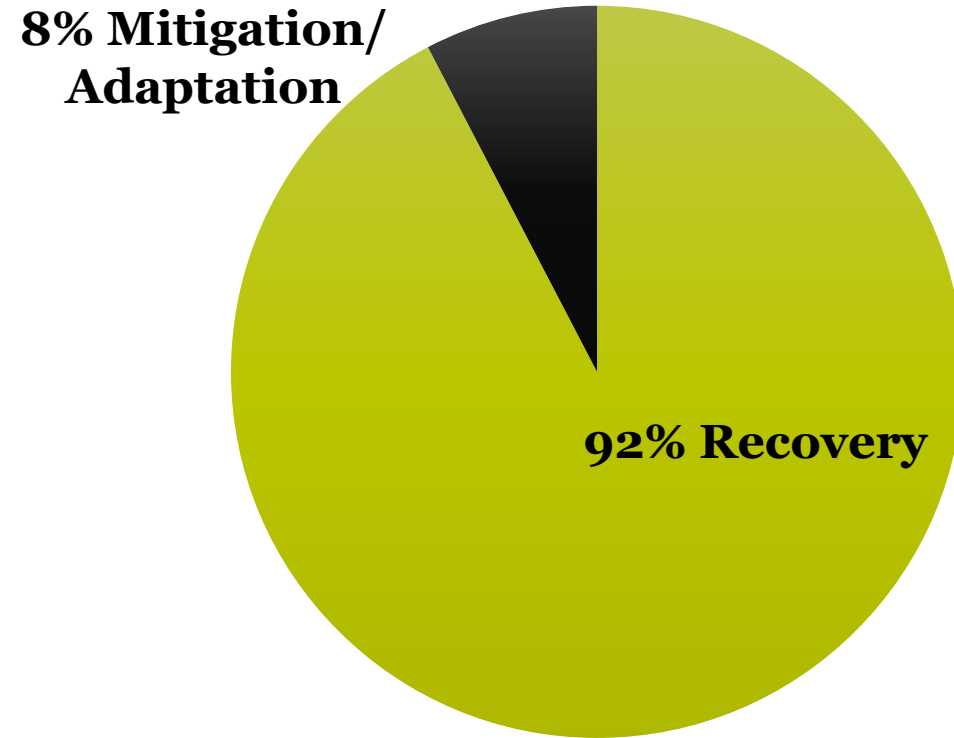


POLITICAL ECONOMY OF CLIMATE RISK

Federal Government spending on recovery vs mitigation



Modelled spending on recovery vs mitigation



GOVERNANCE OF DRR

We live
here







LAND-USE PLANNING/DEFENSES – Cities

RISK COMMUNICATION – Cities/Prov

PROPERTY-LEVEL-PROTECTION - You

INSURANCE - Private

DISASTER ASSISTANCE – Feds/Prov



RISK COMMUNICATION

PROPERTY-LEVEL-PROTECTION

INSURANCE

DISASTER ASSISTANCE



PROPERTY-LEVEL-PROTECTION

INSURANCE

DISASTER ASSISTANCE



INSURANCE

DISASTER ASSISTANCE



DISASTER ASSISTANCE



LAND-USE PLANNING/DEFENSES – Cities

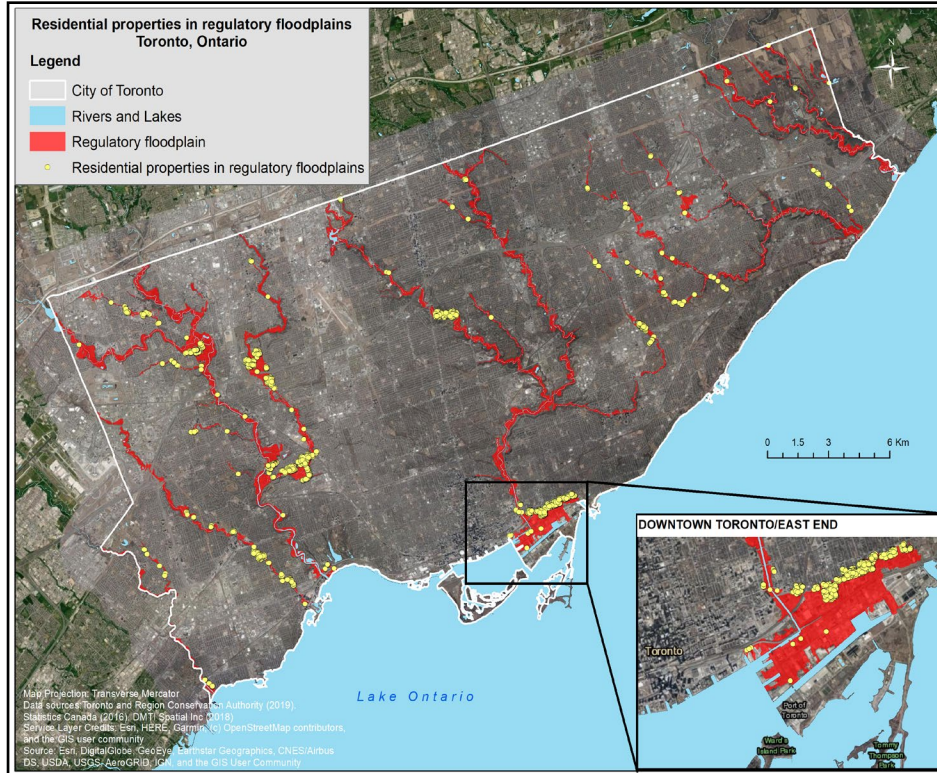
RISK COMMUNICATION – Cities/Prov

PROPERTY-LEVEL-PROTECTION - You

INSURANCE - Private

DISASTER ASSISTANCE – Feds/Prov

LAND-USE PLANNING



One way to battle future flooding: stop building on flood plains, say experts



Goodale says building on land prone to flooding will be brought up with provincial counterparts at May meeting

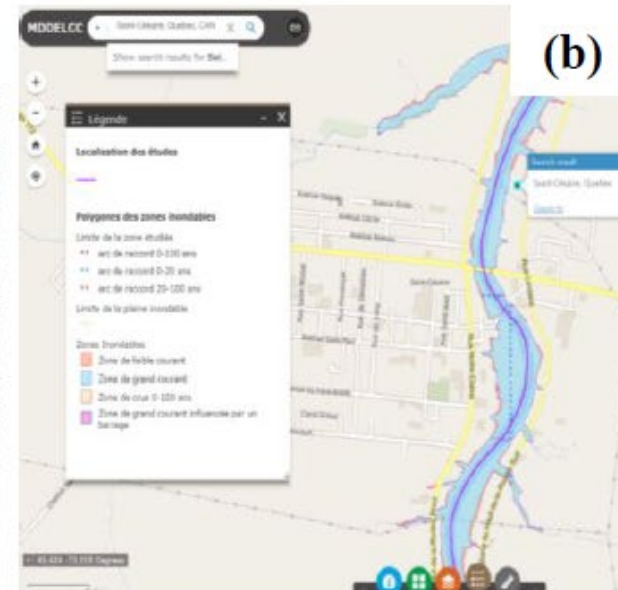


RISK COMMUNICATION

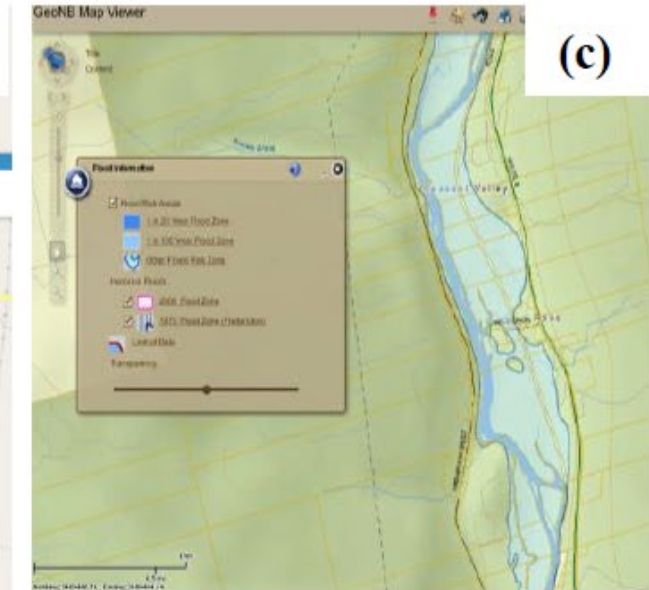
- Evaluated maps from 369 communities
- 62% found to be “low-quality” (failed to meet half the criteria)



Barriere, B.C
22% (2/9)



Saint Césaire, QB
44% (4/9)



Pleasant Valley, NB
67% (6/9)

DISASTER RECOVERY SPENDING

\$2.9B = Modelled annual spending on recovery

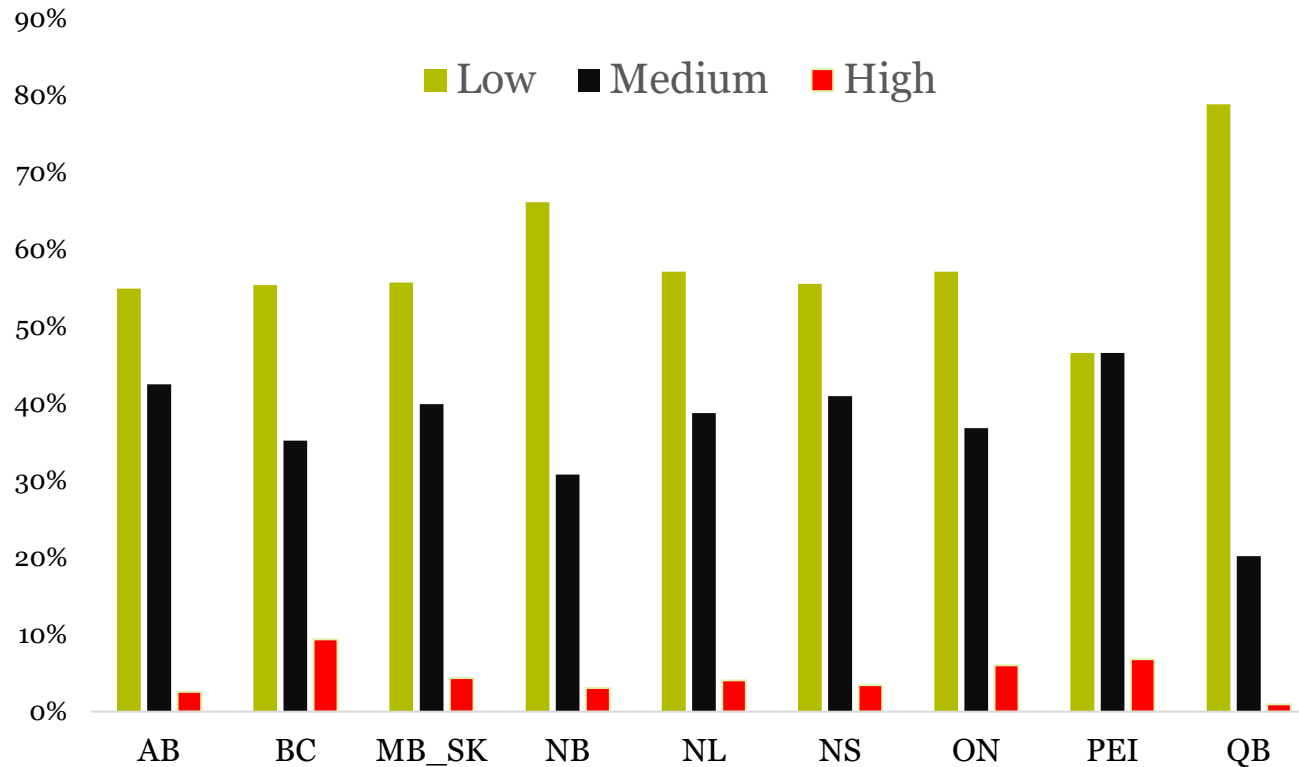


GOVERNANCE OF DRR DIFFUSES ACCOUNTABILITY FOR CHANGE



WEAK PUBLIC RISK AWARENESS

How concerned are you about flood risk to your current home?



*N=2300 who live in high risk areas

'This is an act of God': Fraser Valley farmer warily watches as waters rise



MOBILIZING RISK INFORMATION



1. Enhance whole-of-society collaboration and governance to strengthen resilience;
2. Improve understanding of disaster risks in all sectors of society;
3. Increase focus on whole-of-society disaster prevention and mitigation activities;
4. Enhance disaster response capacity and coordination and foster the development of new capabilities; and
5. Strengthen recovery efforts by building back better to minimize the impacts of future disasters.



Canada is rethinking how it deals with flooding. It's about time

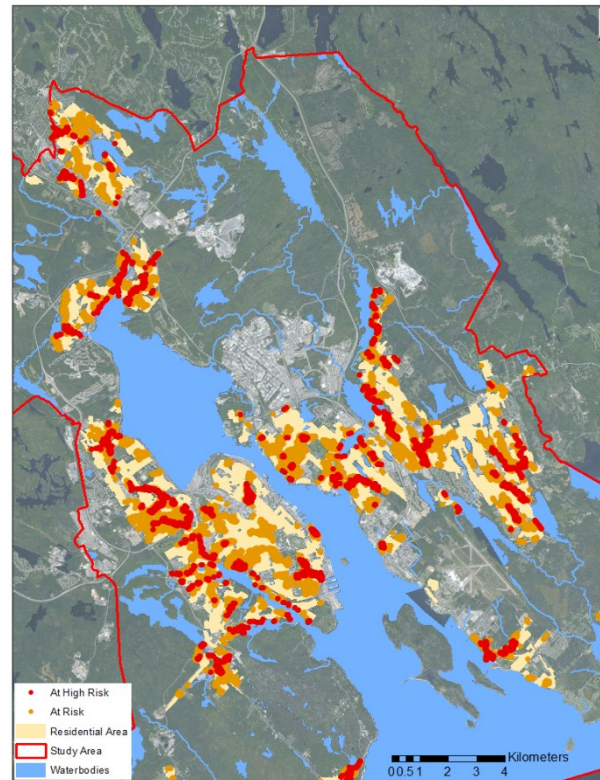
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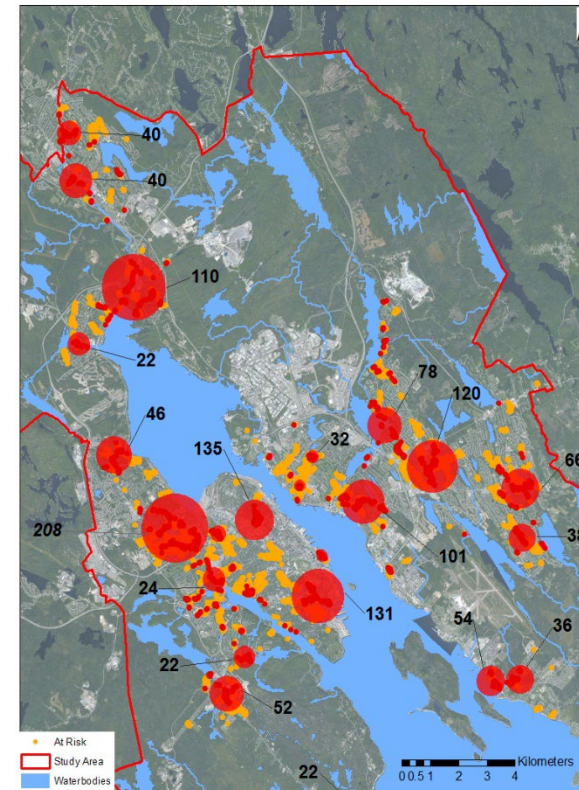
ACCOUNTABILITY VIA RISK INFORMATION



Existing maps
(hazard)



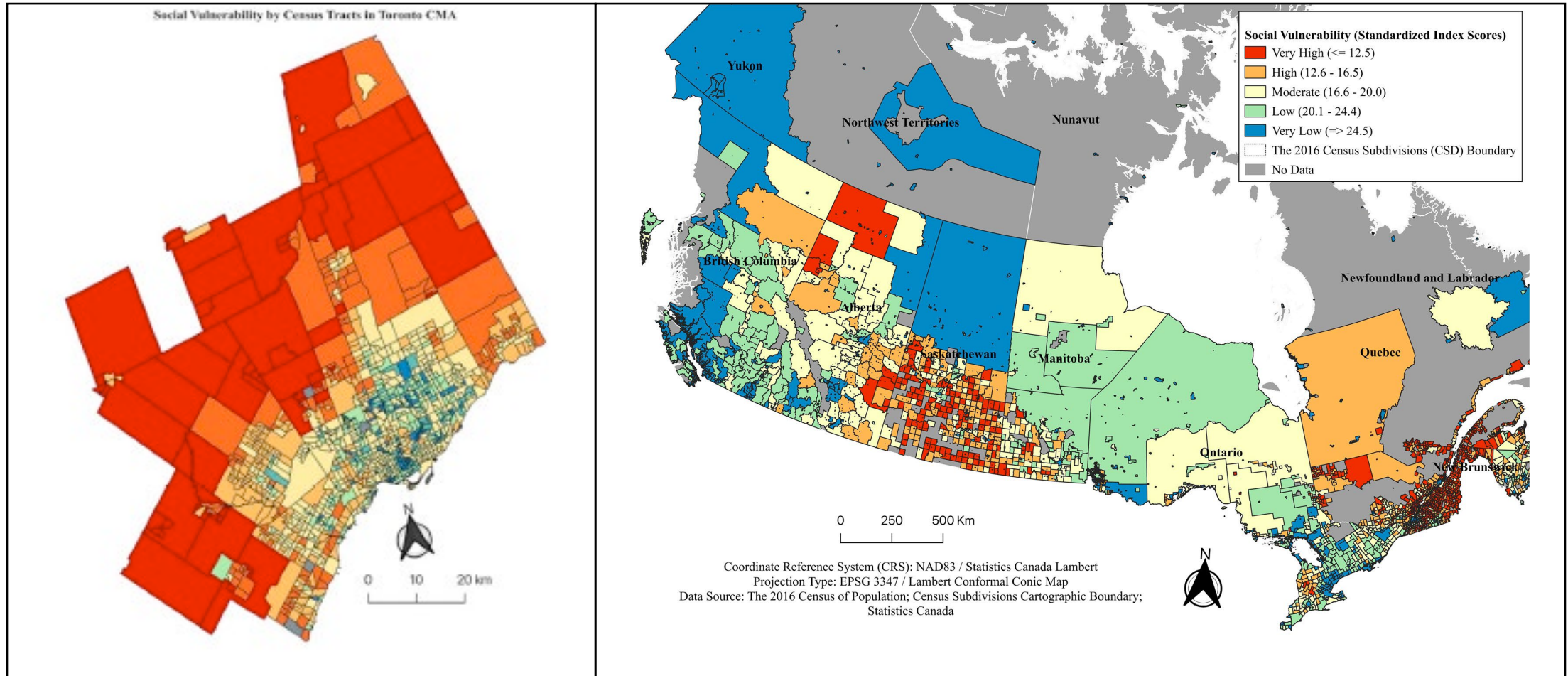
Risk-based maps
(buildings exposure)



Building count



EXPANDING ADAPTATION CONSTITUENCIES



Chakraborty, L., Rus, H., Henstra, D., Thistlethwaite, J., & Scott, D. (2020). A place-based socioeconomic status index: Measuring social vulnerability to flood hazards in the context of environmental justice. *International Journal of Disaster Risk Reduction*, 43, 101394.

<https://doi.org/10.1016/IJJDRR.2019.101394>

Chakraborty, L., Minano, A., Thistlethwaite, J., Scott, D., Henstra, D., & Rus, H. (2022). Assessing social vulnerability and identifying spatial hotspots of flood risk to inform socially just flood management policy. *Risk Analysis*. (Forthcoming).



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EXPAND THE ROLE OF THE FEDERAL GOVERNMENT

0 have conducted vulnerability assessment

20% have policy on risk reduction

11% identified vulnerable areas

17% identified vulnerable groups



Evaluating city climate change plans:
63 Plans
43 indicators

EXPAND ROLE OF FEDERAL GOVERNMENT IN LOCAL ADAPTATION

Increase the federal cap on funding to municipal climate projects (40% in Canada vs. 75% in the US).

Develop a publicly accessible interface for communicating local climate change risk.

Centralize coordination via an independent Canadian Emergency Management Agency



KEY MESSAGES

1. Adaptation is not politically popular: the political benefits of investment in recovery (i.e. disaster assistance) exceed those of adaptation (i.e. anticipatory mitigation)
2. Disaster management policy limits opportunity for governments to be held accountable for adaptation
3. Mobilization of risk information and expanding the role of the federal government could improve the politics of adaptation in Canada

THANK YOU!

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