Planning for the future: Local-level adaptation to climate change

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Outline

1. Adaptation Planning
2. Benefits & Risks of Adaptation
3. Making Adaptation Work
Climate change has increased disaster risk (IPCC, 2022)
Climate impacts are costly.

Projected Canadian yearly losses:

2025: $25B
2100: $100B

(Sawyer, 2022)
1. Adaptation Planning

Planning, disaster risk and adaptation
Planning guides local-level decision making on future land use, development and infrastructure.

Planning makes recommendations specific to the local context through:

- Technical data
- Public engagement
Adaptation Planning for Risk Reduction

Every $1 now can save $15 in the future
Hard Adaptation
Structural measures & infrastructure updates

Soft Adaptation
Non-structural & ecosystem-based measures
Simple, right?

... not quite.
2. Benefits & Risks

Costs, uncertainty and maladaptation
Why is Adaptation Important?

- Reduces Risk
- Mitigates Cost
Low-risk and high-benefit adaptation policy prepares communities for uncertainty and builds capacity.

What are the BENEFITS?
There are risks & limits to adaptation.

Unmitigated warming is already outpacing our capacity to adapt.
Maladaptation: when adaptation measures result in unintended negative consequences that further increase risk and vulnerability
3. Making Adaptation Work
Addressing Vulnerability, Place-based Approaches & Adaptive Capacity
1. Addressing the right thing
2. Using the right approach
3. Having enough of the right stuff
Why does vulnerability exist?
Physical Vulnerability
Exposure to hazards and physical risk

Social Vulnerability
Social stressors & environmental injustice
Vulnerability is unique to each community, requiring a Place-Based Approach.
Place-based approach:
Coordinating long-term risk reduction through collaboration with communities
Communities must have Adaptive Capacity
Adaptive Capacity  
(Cinner et al. 2018)

1. Assets  
   ○ Financial, technical and public resources

2. Flexibility  
   ○ Diversity of options and strategies

3. Social Organization  
   ○ Cooperation, collective action and knowledge sharing

4. Learning  
   ○ Living and managing uncertainty

5. Agency  
   ○ Power and freedom to shape their future
4. Conclusion
Adaptation planning plays a big role in disaster risk reduction.

Adaptation has benefits & risks.

Effective adaptation requires:
  ○ Addressing vulnerability
  ○ Using place-based approaches
  ○ Requires capacity to implement measures

Key Takeaways
“The cumulative scientific evidence is unequivocal: Climate change is a threat to human well-being and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all.” (p.35, IPCC, 2022)
Thank you

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