

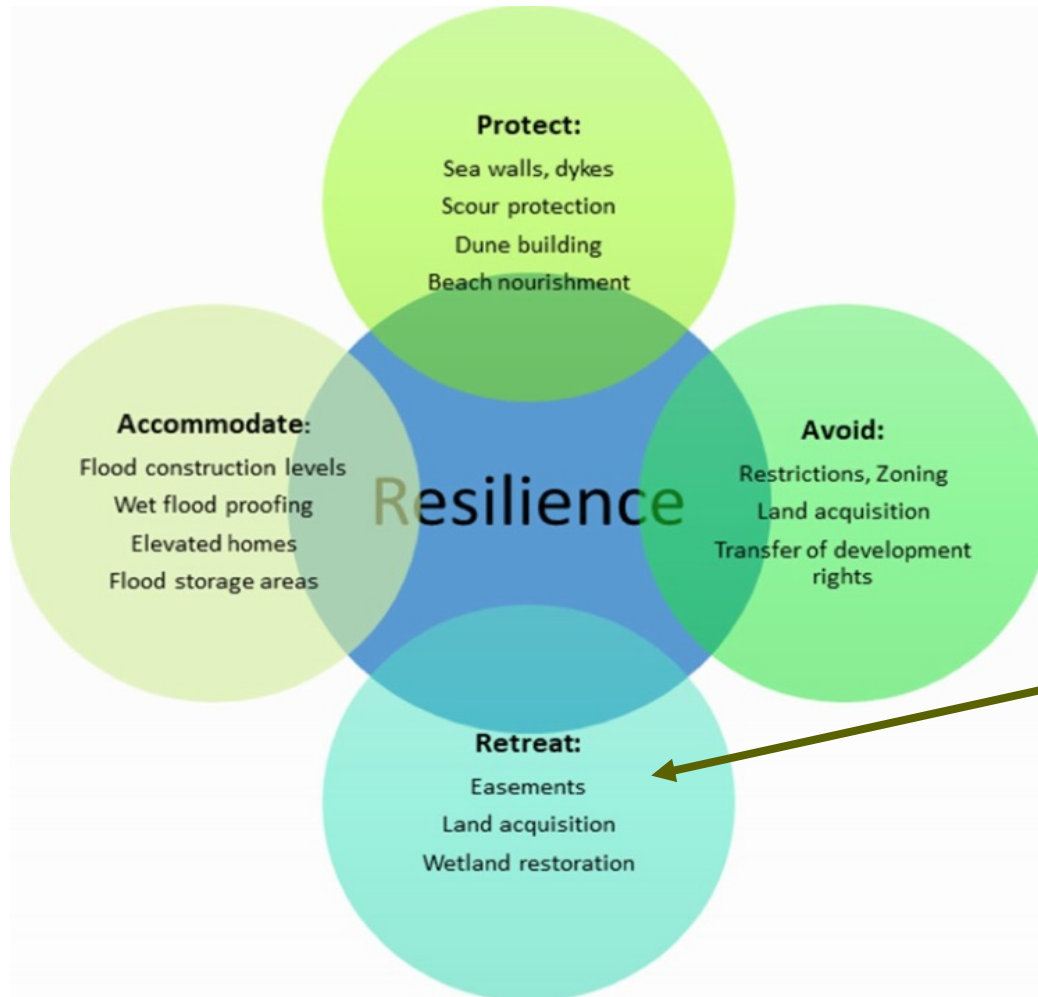
Managed Retreat, Community Resilience & Post Flood Decisions: A comparative analysis of Constance Bay, ON & Pointe Gatineau, QC

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Disaster and Resilience 2021



What is managed retreat?



(Doberstein, Fitzgibbons & Mitchell, 2018)

- **PARA** framework

- Permanent relocation of community and infrastructure that is forced by natural hazards, but also the integration of restoring and elevating livelihoods in the planning process (Grieving, Du & Puntub, 2018)

- Managed retreat → Proactive vs. Reactive

- Property buyouts
- Relocation programs



Context

Research Questions:

1. How have property buyout programs and/or disaster recovery assistance programs been implemented in Canadian communities?
2. What factors or policies affect homeowner's decision in retreating or rebuilding their homes after major floods?

Research Objectives:

- to investigate provincial policies (i.e., home buyout programs and disaster recovery assistance) in relation to climate induced disasters,
- to identify the barriers that restrict homeowners from making decisions that relate to retreating,
- to understand the reasoning behind the planning and deployment of policies,
- to offer recommendations to improve existing funding models related to post flood assistance programming

Methodology:

- Empirical case study (n=20)
- Purpose & snowballing methods, semi-structured interviews
- Grounded theory methodology
- Experts from government, academia, research institutes, real estate, insurance, disaster relief, community organizations



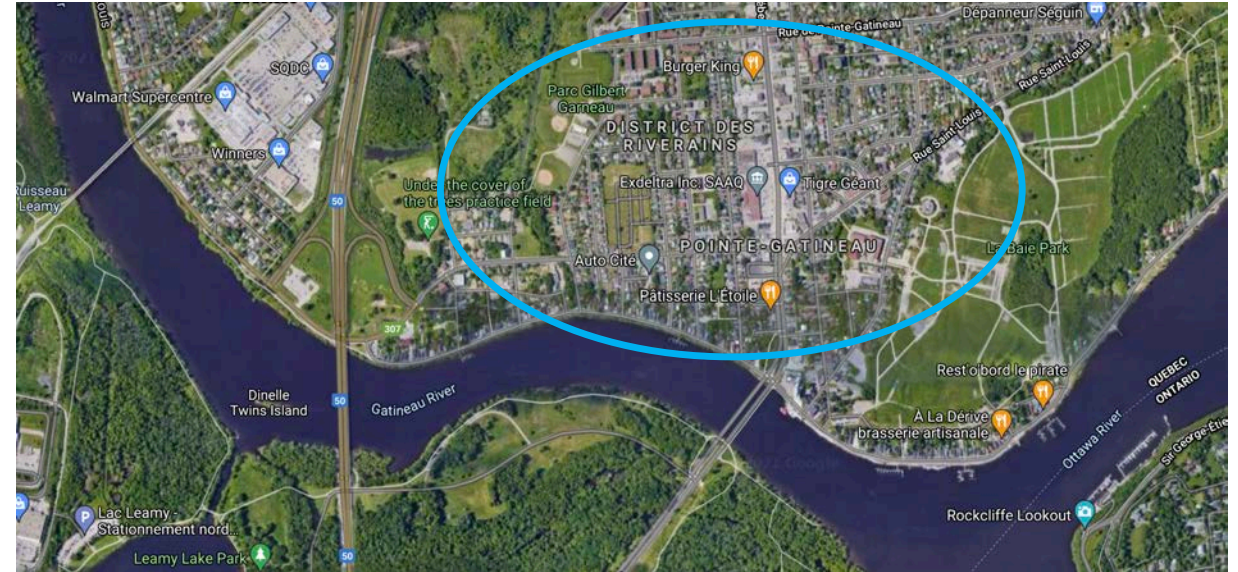
Case Studies

Pointe Gatineau, Quebec

- Bordered by the Ottawa River and experienced severe flooding in 2017/2019
- Government of Quebec revamped its financial assistance program to include property buyouts to eligible homeowners
- Formal implementation of managed retreat
 - Compensation Structure – max. of \$200K for property + \$50K for land
 - Reactive
 - Small-scale
 - Use of special intervention zones



A property in Pointe Gatineau, QC opposite the Ottawa River undergoes structural renovations after the 2019 floods (Cottar, 2019).



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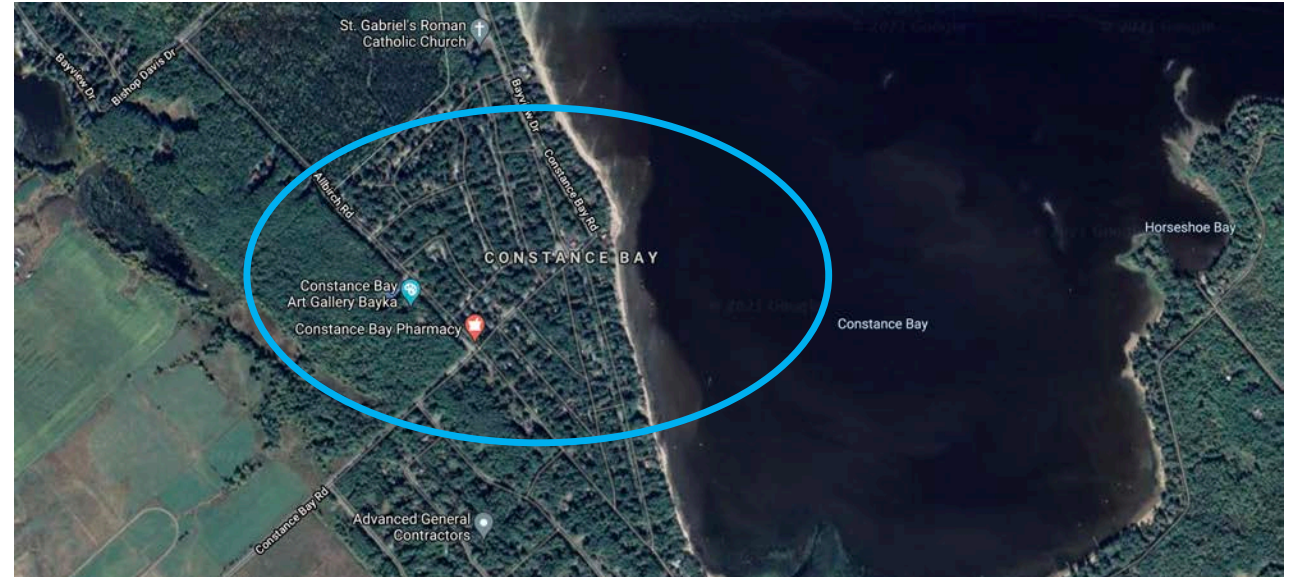
Case Studies Cont'd

Constance Bay, Ontario

- Northwest corner of Ottawa bordered by the Ottawa River and experienced rainfall and snow-ice melt in 2017/2019
- Government of Ontario offered disaster recovery assistance to help disaster victims repair essential property → not a substitute for insurance
- No formal implementation of managed retreat



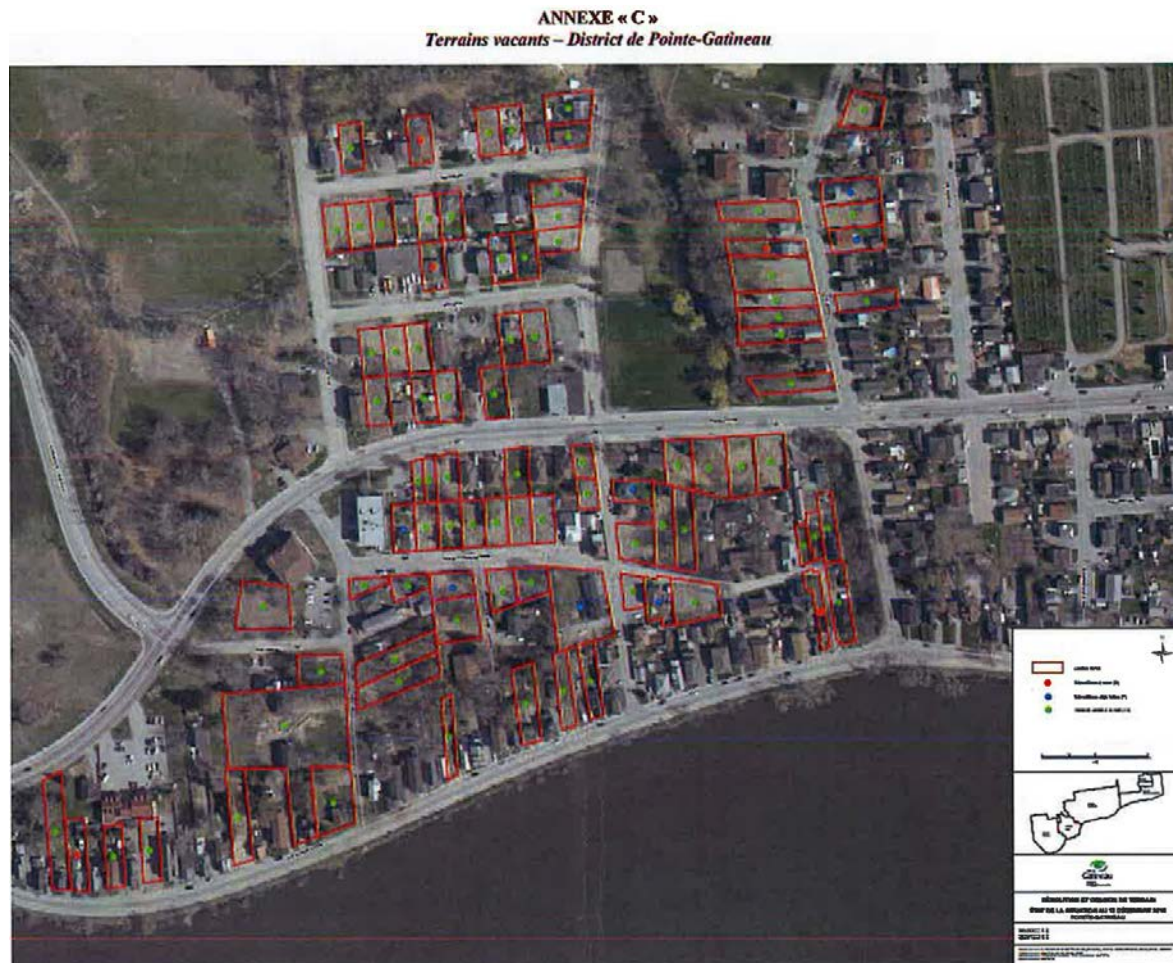
A property in Constance Bay, ON is surrounded by sandbags to protect it from the flooded banks of the Ottawa River (Cottar, 2019).



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Results



This map illustrates a bird's eye view of all the major plots that were flooded and bought out in Pointe Gatineau after the 2017 and 2019 floods. The plots marked with a red box have been purchased by the provincial government and transferred to the city of Gatineau for demolition. (KI13)

Pointe Gatineau, Quebec

- Provincial government issued a moratorium on 776 municipalities
 - 2017: 185 properties have been demolished of which 148 have transferred ownership
 - 2019: 34 properties have been demolished
- Extensive application process
- Future mitigation projects
- Neighborhood beautification

Results Cont'd



Constance Bay, Ontario

- Unmanaged 'self' retreat
 - 30% increase in homes that hit the market in summer 2019
- 2017: 380 homes impacted by the Ottawa floods
- 2019: DRAO → < 108 applications were approved

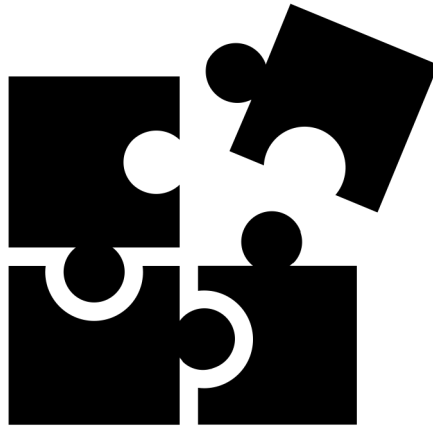


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Takeaways

- Modify the Disaster Recovery Assistance for Ontarians (DRAO) program
- Provide better support for managed retreat/buyout programs
- Create better risk communication strategies for homeowners living in floodplains
- Create stronger connections between proactive managed retreat and broader community risk reduction and livability strategies
- Create national guidance on managed retreat best practices
 - Promote provincial harmonization of buyout programs



To access the journal publication:

Cottar, S., Doberstein, B., Henstra, D. *et al.* Evaluating property buyouts and disaster recovery assistance (Rebuild) options in Canada: A comparative analysis of Constance Bay, Ontario and Pointe Gatineau, Quebec. *Nat Hazards* (2021). <https://doi.org/10.1007/s11069-021-04832-4>