

Adaptation Futures 2025

# Progress on climate change adaptation in practice:

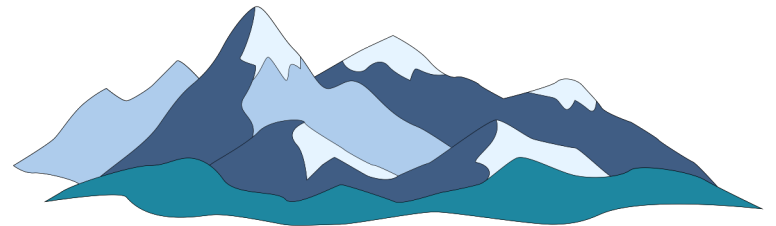
## Insights from local and territorial government interactions

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# Agenda

- ① Transformative adaptation in Yukon
- ② Research gaps & objectives
- ③ Research approach
- ④ Results
- ⑤ Insights
- ⑥ Recommendations





# The Case of Yukon

# Yukon, Canada

Population: 47,595

## Subarctic Climate

- Long and cold winters
- Short moderately warm summers
- Low annual average precipitation



(Statistics Canada, 2022; Climate Data, 2024)

# Climate Impacts

- Yukon is warming at a rate of up to 3-4 times the global average
- Climate impacts are becoming more frequent and severe



Wildfire



Flood



Permafrost thaw

(Rantanen et al, 2022; Suter et al., 2019)





# Climate Adaptation

Coping

Incremental

Transformative

# Transformative Adaptation

- Addresses the root causes of vulnerability
- Facilitates long-term shifts in systems
- Difficult to implement due to barriers



Costly



Slow to show  
results



Challenges  
the status quo

# Research Gap



Barriers to local adaptation are well-researched



Why adaptation enablers and barriers emerge remains understudied



Adaptation governance has received significant attention



There is a lack of literature investigating government interactions in the context of the local-territorial government relationship





# Research Objectives

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- We explored progress on climate adaptation in order to:
  - Shed light on the local-territorial government relationship
  - Examine how dependencies and power emerge to create adaptation enablers and barriers



# Research Approach

## Key Actor Interviews

- Planners
- Elected Officials
- Senior Managers
- Engineers



## Document Review

- Official Community Plans
- Zoning Bylaws
- Climate Adaptation Strategies





# Results

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Climate impacts  
& response



Adaptation  
challenges



## Climate Impacts



Flood



Permafrost  
thaw



Wildfire

# Community Response

- Elected officials, planners, and senior managers in Yukon are committed to climate action. They have:
  - Enhanced their understanding of climate impacts
  - Conducted risk assessments and vulnerability analysis
  - Mainstreamed adaptation goals into planning and policy tools



# Community Response

- Despite this:
  - Adaptation goals remain high level and vague
  - Mitigation is prioritized over adaptation





# Adaptation Challenges

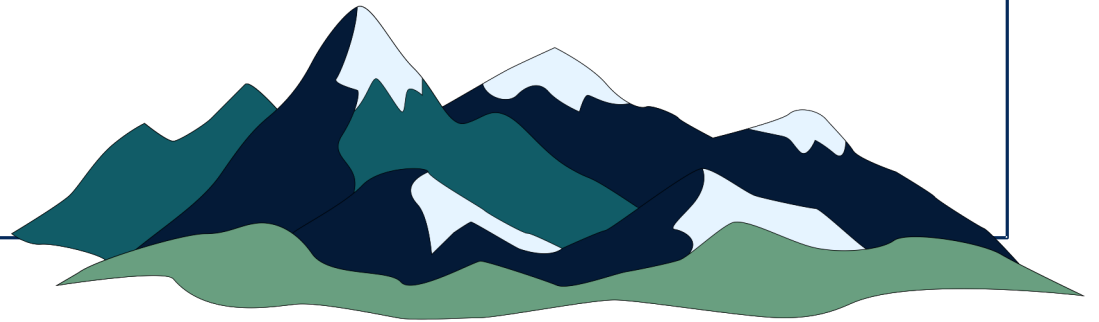
Progress on adaptation has waned and implementation lags...  
But why?

# Adaptation Challenges



## Lack of Capacity

- Financial resources
- Expertise
- Personnel
- Time



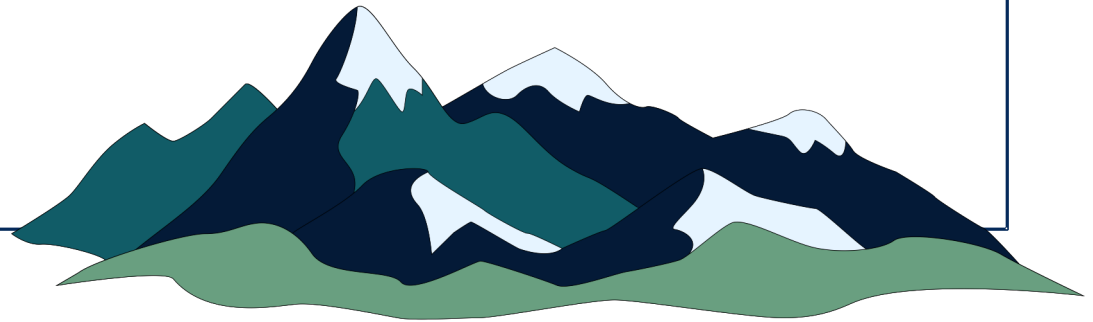
# Adaptation Challenges





## Confusion Around Government Roles




- Reliance on higher levels of government
- Lack of communication
- Limited Trust

"Well, that's part of the question, and we have to figure that out" (HJ2).





" ... That causes problems, because there's a lack of communication or misinformation between the two governments" (DC3).



"The bigger policy decisions are made at a territorial level, and we don't always have the opportunity to have input on them, which is unfortunate because they're not on the ground to see what happens" (DC2).

# Key Insights



## Path Dependencies

Past climate events spur local leadership



## Goal Dependencies

Prioritization of mitigation over adaptation



## Interdependencies

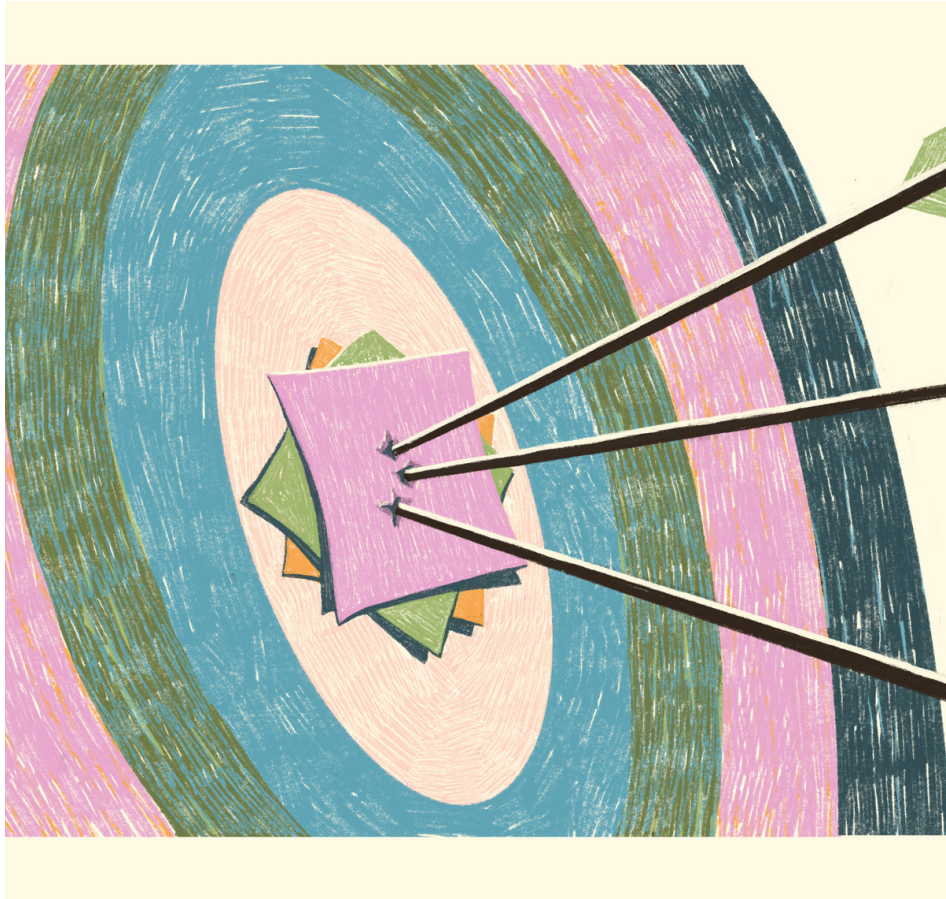
Lack of communication and trust



# Path Dependencies

- Past climate events result in awareness of the need to respond
- Awareness is translated into tangible planning priorities
- Path dependency can highlight the need for transformative adaptation





## Goal Dependencies

- Transformative adaptation is enabled by the presence of strong local leadership
- However, local leaders in Yukon prioritize mitigation over adaptation
- Resources are dedicated to mitigation, while adaptation implementation is constrained

# Interdependencies

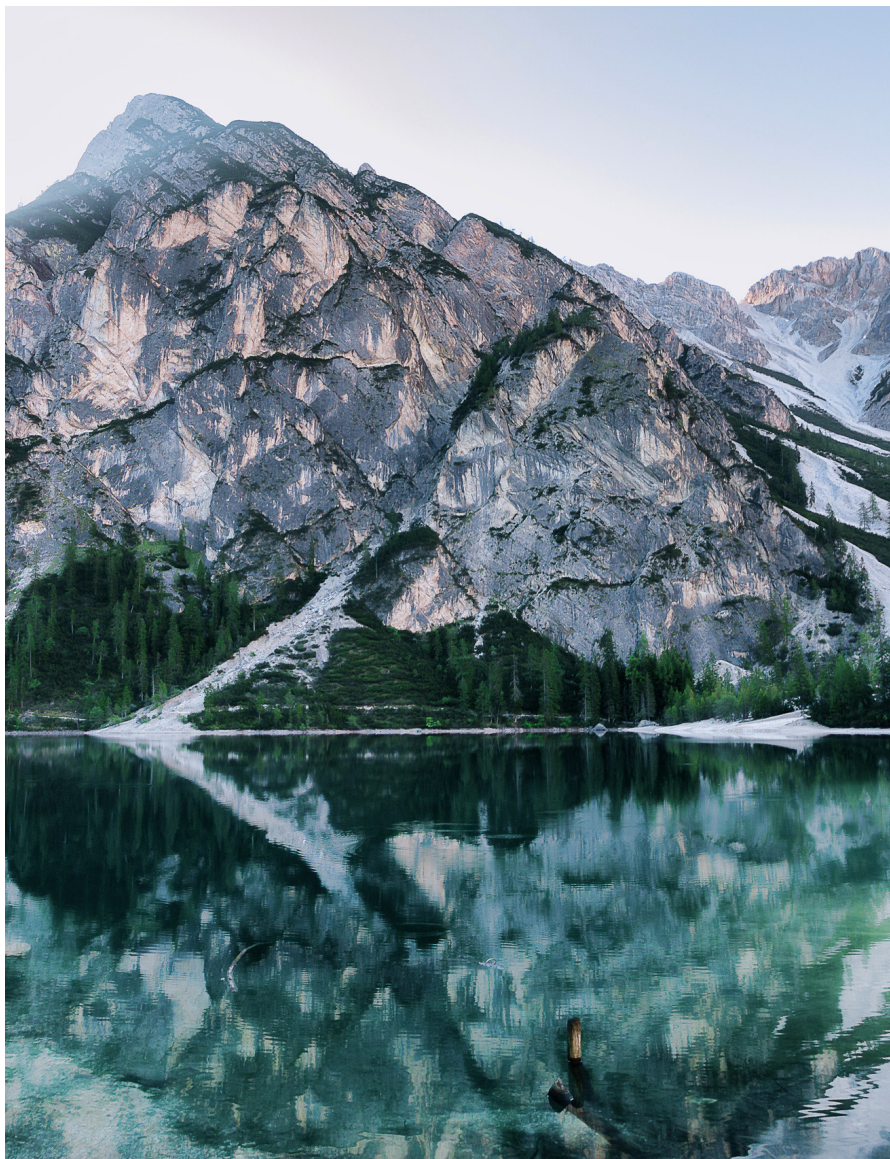
- Lack of effective intergovernmental collaboration constrains transformative adaptation
- Reliance on higher levels of government for direction and support
- Lack of leadership and stalling efforts at the local level



(Fedele et al., 2019; Beunen et al., 2015)



# Implications



## Recommendations



Actors at all levels of government meet regularly to establish trust and to delineate government roles

- E.g. Italy's United Conference (Giacomini et al., 2022)



Institutions are strengthened to facilitate transformative adaptation

- Detailed adaptation policies, committal language, rigorous implementation plans

(Di Gregorio et al., 2019; Giacomini et al., 2022; Guyadeen et al., 2019)



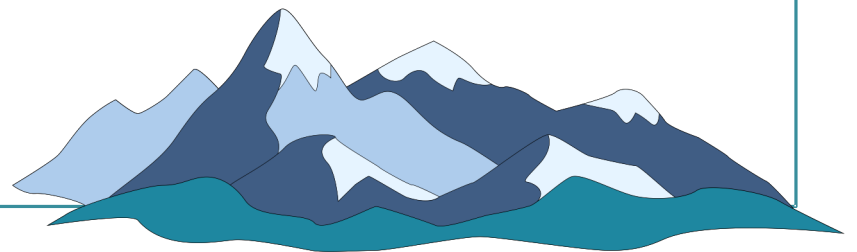
**Thank you!**

# For Further Information

Birchall, S.J, Bonnett, N, & Rose, D. (2025). *Environmental Science and Policy*. Progress on climate change adaptation in practice: Insights from local and territorial government interactions.

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**Questions?**

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