

# Climate Change Adaptation

Research Group

McGill University



## Government-led adaptation in Nunavut: Successes, challenges and future directions

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## Context: Climate Change & Adaptation in the North

Rapid climate change

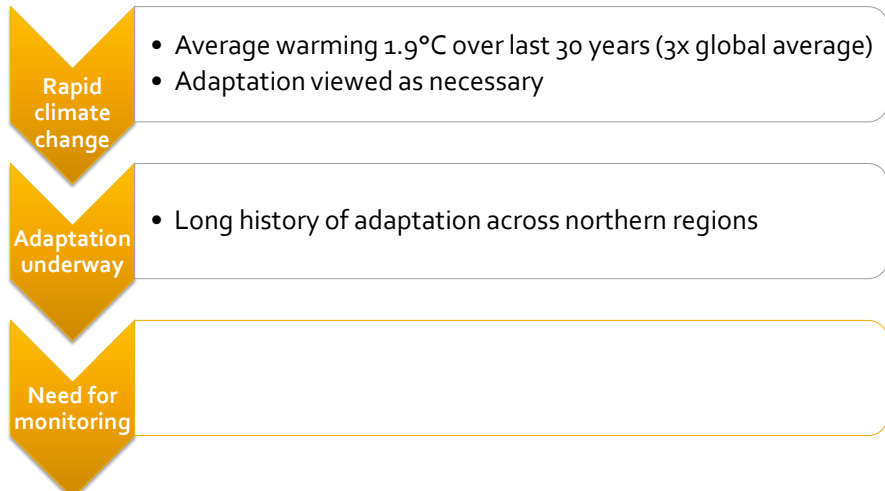
- Average warming 1.9°C over last 30 years (3x global average)
- Adaptation viewed as necessary

Adaptation underway

Need for monitoring

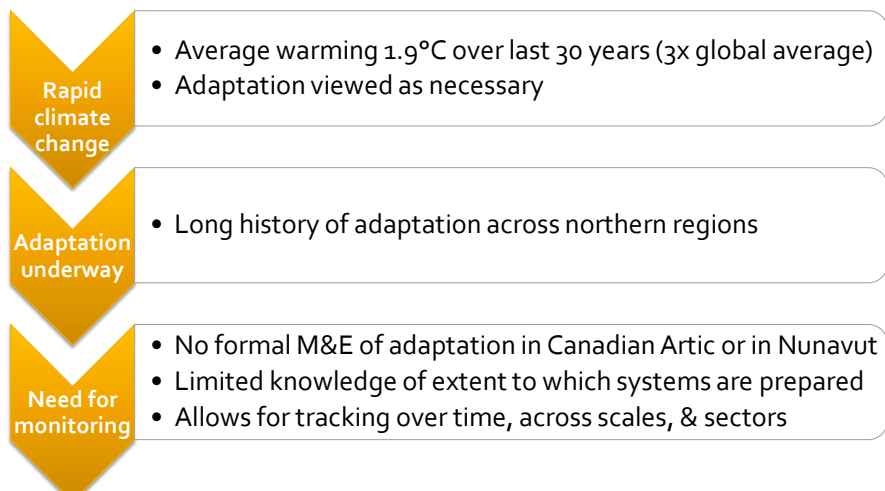
(Lenton, 2012; Duatrite et al 2012; Comiso & Hall, 2014; Ford et al. 2015; Ford et al. 2014; Biesbroek et al 2010; Berrang-Ford et al 2010; Labbé et al. in prep)

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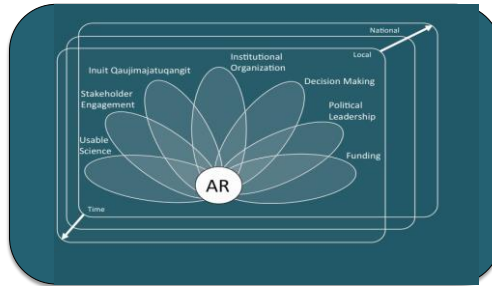
# Project Approach & Methods

- 1. Create an adaptation baseline that shows us "where Nunavut is at?" that could also be used for future M&E
- 2. Evaluate the current status of adaptation readiness in Nunavut and identify key linkages and barriers key

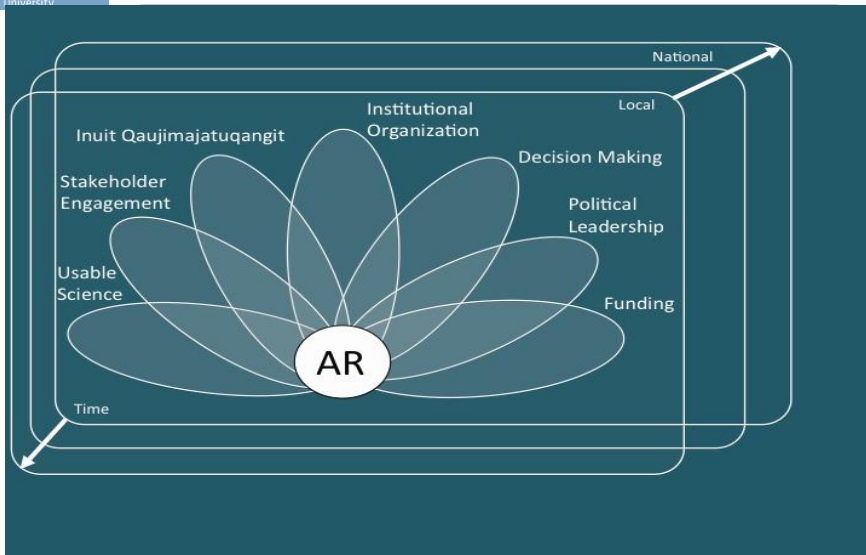
## 1. BASELINE

Systematic method to locate and characterize publically available adaptation initiatives

## 2. ADAPTATION READINESS



# Project Approach & Methods





## Adaptation baseline: General trends emerging

- Adaptation is on Nunavut's radar
  - Found 700 difference adaptation initiatives for federal, territorial, and community scales



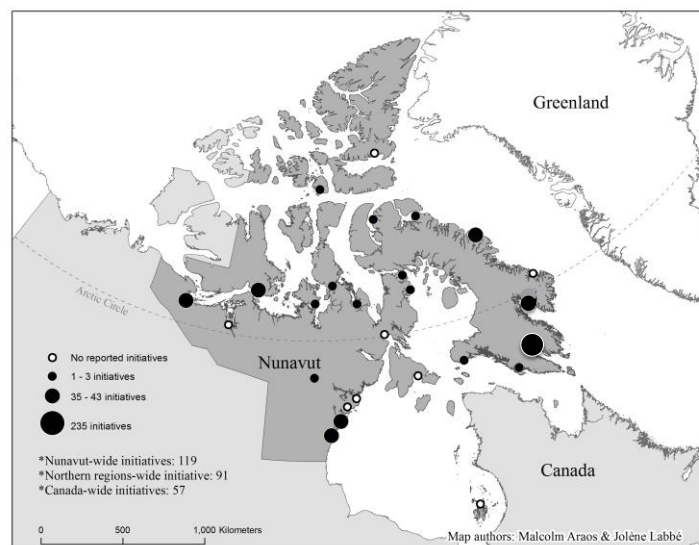
## Adaptation baseline: General trends emerging

- Adaptation is on Nunavut's radar
  - Found 700 difference adaptation initiatives for federal, territorial, and community scales
- Low evidence of implementation
  - Action & progress remains in the early stages
  - Most initiatives were in the planned or recommended stage

## Adaptation baseline: General trends emerging

- Adaptation is on Nunavut's radar
  - Found 700 difference adaptation initiatives for federal, territorial, and community scales
- Action & progress remain in the early stages
  - Most initiatives were in the planned or recommended stage
- Climatic & non-climatic motivations are equally important
  - Biophysical climate change impacts are rarely the sole motivation

## Adaptation Baseline: Example output





## Adaptation Readiness: General trends emerging

- Importance of mandating
  - Without adaptation and climate change as consideration in department mandate, other concerns are priority
  - Need to ensure resources and capacity are adequate
  - Reduces ad hoc adaptation



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  - Need to ensure resources and capacity are adequate
  - Adaptation plans
- Access to reliable information for decision making
  - Data not often shared with decision makers
  - Decision makers unsure how to use data, in unusable format

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  - Bringing a climate change or adaptation lens
  - Institutional organization

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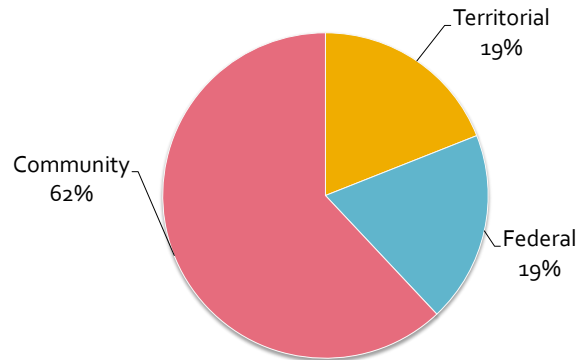
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  - Institutional organization
- Importance of incorporating Traditional Inuit Knowledge
  - Often difficult but will determine uptake of adaptation interventions
  - Different conceptualizations





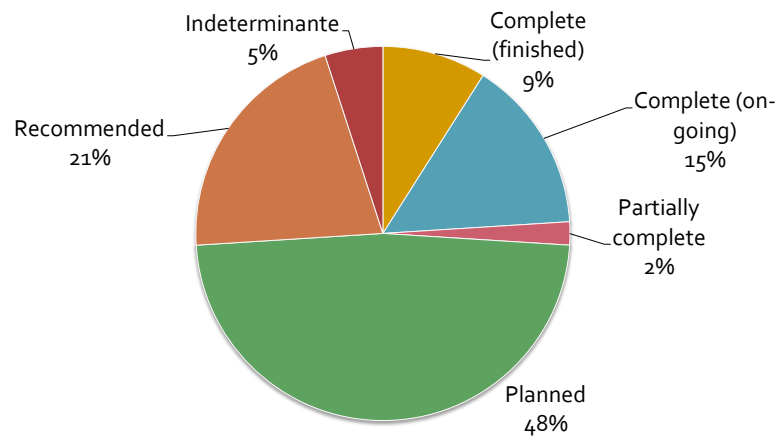
## Adaptation Landscape: Where is adaptation occurring?

- At what jurisdiction are initiatives being implemented?

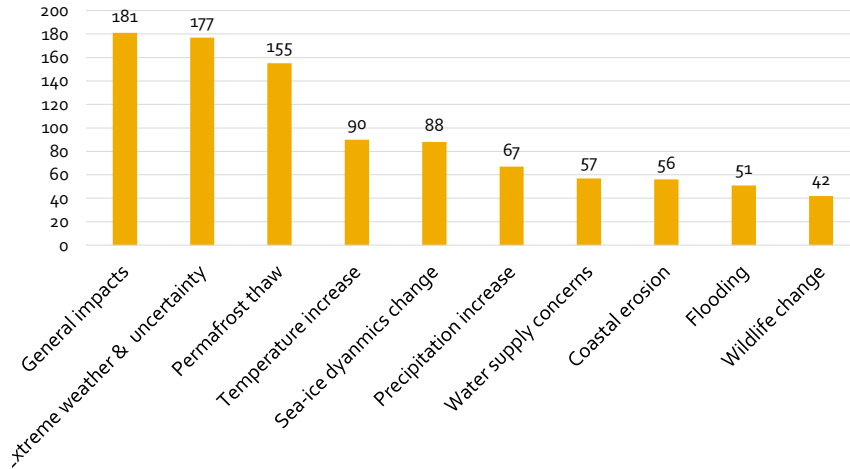


## Adaptation Landscape: How is Nunavut progressing?

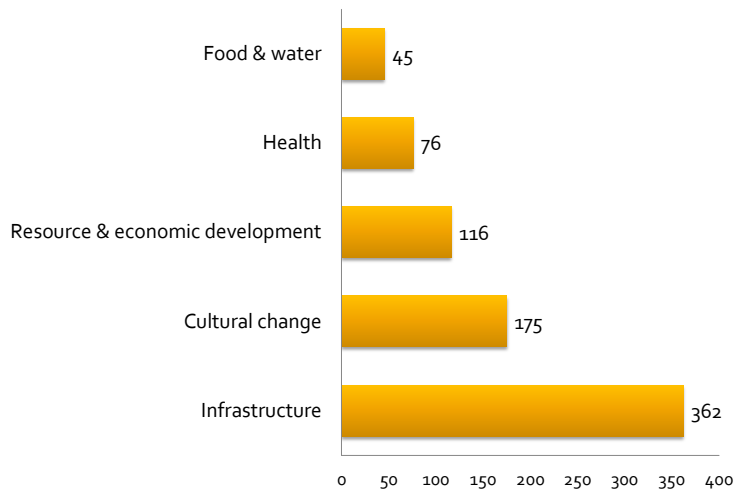
- What stage are adaptation initiatives in?



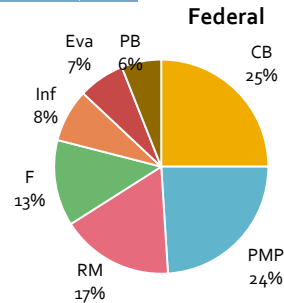
## Adaptation Landscape: What climatic risks motivate the greatest level of response?



## Adaptation Landscape: What non-climatic risks motivate the greatest level of response?

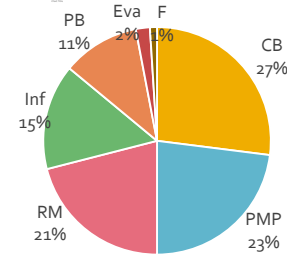


## Adaptation Landscape: What kind of adaptation is happening?

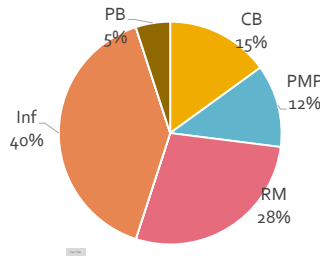


**Legend**

- Eva** = evaluation
- PB** = practice & behaviour
- F** = funding
- CB** = capacity building & information sharing
- PMP** = policy, management & planning
- RM** = research & monitoring
- Inf** = infrastructure, technology & innovation



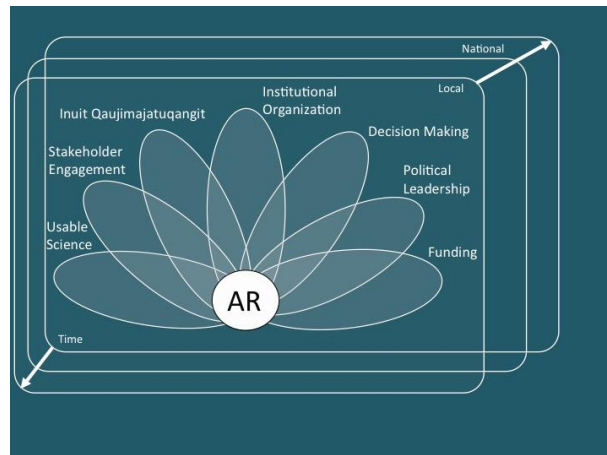
**Territorial**



**Community**

## Part 2 – Adaptation Readiness:

- Evaluation of on the ground preparedness to adapt
- Assessment & rating of 7 “readiness factors” that are necessary for adaptation to occur
- Evaluated through 32 in-depth interviews



## What does this all mean?

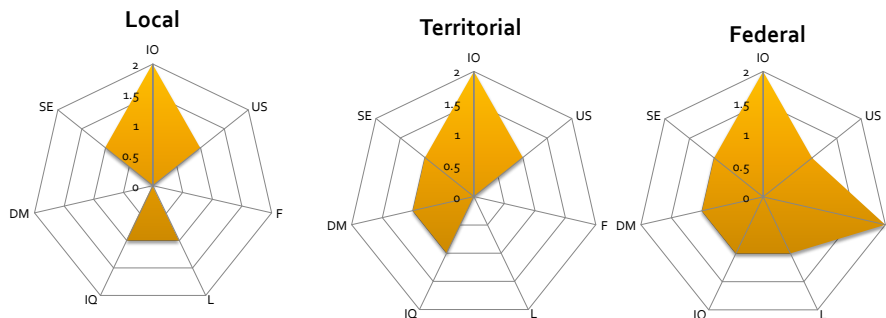
### Adaptation Landscape in Nunavut

- In some ways, adaptation is on Nunavut's radar, but remains in early stages
- Moving forward, need to ensure that culturally appropriate actions are engaged in (to avoid maladaptation) and focus on mainstreaming

### Adaptation Readiness in Nunavut

- Awareness and understanding about cc/a is increasing at all levels
- Adaptation is happening at all levels, where there are many links across and between scales, as well as faces numerous barriers (i.e. is rarely mainstreamed)
- Nunavut's adaptation readiness varies highly across scales and is context- and department-dependent

## Preliminary Results: ARF Ratings across scales



IO = Institutional Organization

US = Usable Science

F = Funding & Resources

L = Political Leadership

IQ = Inuit Qaujimajatuqangit

DM = Decision Making

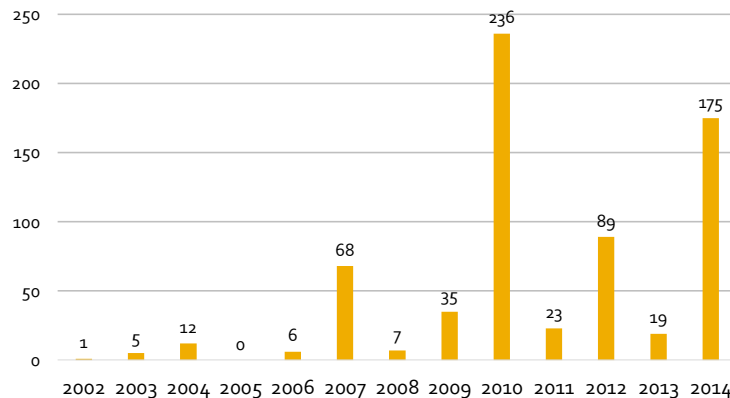
SE = Stakeholder Engagement

## Preliminary Results: Usable Science Rating = 1 (fed, terr)

Examples of key barriers across scales		
<b>1. Data not always shared with decision makers</b>	<b>2. Accessing reliable information</b>	<b>3. Scientific data not translated to be policy-ready</b>
<p>"There is such disconnect. I go and see presentations and studies [at conferences] and [researchers] never sent us anything more than half page update. And they're presenting and publishing papers and there's lot of relevant, great information there"</p>	<p>"The main challenges are always accessing information and reliable data and having [it] in a format that is actually understandable by decision-makers. At all three levels of government. Sometimes you don't have all the climate or impact data but you need to make a decision."</p>	<p>"...I've heard people at the municipal level saying, I can't use the new [climate data] information. I can kind of use the old. I could struggle to use it but now days you need to know a specific script and a specific language to download it from Environment Canada"</p>

## Part 1 – Adaptation Landscape: How is Nunavut progressing?

- Are we focusing on more adaptation over time?



## Part 1 – Adaptation Landscape: How is Nunavut progressing?

- Inuit Qaujimajatuqangit & adaptation

