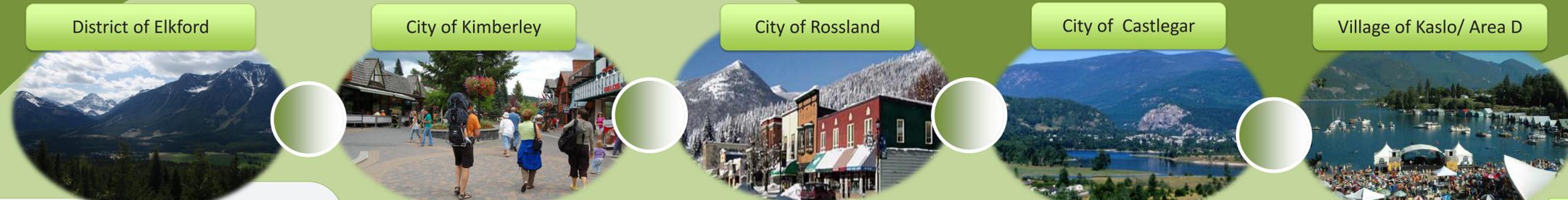


ASSESSING CLIMATE CHANGE
VULNERABILITIES, RISKS &
OPPORTUNITIES: A CASE STUDY
OF FIVE COMMUNITIES IN THE
COLUMBIA BASIN

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Overarching Questions:

1. How can rural communities assess the vulnerabilities, risks, and opportunities of climate change?
2. What lessons can be learned from risk and vulnerability assessment processes in the Columbia Basin?

Background:

- The Columbia Basin Trust (CBT) supports programs and initiatives which foster quality of life and address critical issues in the Columbia Basin region of Canada.
- The Communities Adapting to Climate Change (CACC) initiative supports communities to increase their adaptive capacity and resiliency to climate change impacts
- To date, 5 communities have been supported to complete climate change adaptation plans

Step 1 – Get Started

1. Appoint a coordinator
2. Establish a local steering committee
3. Develop workplan

Step 2 – Learn about climate change

1. Historical climate data
2. Future climate projections
3. Local observations

Step 3 – Identify Priorities

1. Engage Community
2. Review existing documents
3. Map climate change impacts

Step 4 – Assess Vulnerability, Risk & Opportunities

1. Map climate Change impacts
2. Choose assessment framework

Step 5 – Develop Strategies and Actions

1. Establish Goals
2. Determine Actions

Step 6 – Implement and Monitor Plan

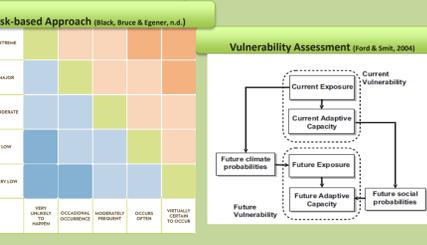
1. Monitor Climate Changes and Strategy Effectiveness
2. Review and update



Map Climate Change Impacts



Assessment frameworks



Combined Risk and Vulnerability Assessment (Snoover et al, 2007)

	Low Vulnerability	High Vulnerability
High Risk	May be priority planning areas	Should be priority planning areas
Low Risk	Are unlikely to be priority planning areas	May be priority planning areas

Case Studies – Risk & Vulnerability Assessment Process

District of Elkford

- Planning Priorities:
 1. Water Quality and Availability
 2. Flooding
 3. Wildfires
- Consultant-based approach
- Integration with Official Community Plan
- Combined Risk and Vulnerability Assessment
 - Vulnerability = Sensitivity x Adaptive Capacity
 - Risk = Vulnerability x Probability
- 1 day workshop

City of Kimberley

- Planning Priorities:
 1. Water and Forests
 2. Municipal Infrastructure
 3. Tourism
- Collaboration with UBC's Collaborative for Advanced Landscape Planning (CALP) to visualize climate change impacts
- Local working group established for each priority area
- Vulnerability assessment based on worksheets developed by each working group
- Assessment based on multiple working group meetings

City of Rosland

- Planning Priorities:
 1. Water availability
 2. Food security
 3. Infrastructure
 4. Energy prices and availability
- Partnership with Simon Fraser University's Adaptation to Climate Change Team (ACT) to assess water, infrastructure, and energy
- Combined Risk and Vulnerability Approach (silent voting dot technique) to rate food security vulnerability and risk

City of Castlegar

- Planning Priorities:
 1. Infrastructure
 2. Water resources
 3. Food & Agriculture
- Partnership with Engineers Canada to assess infrastructure risk and vulnerability
- Online survey with residents, and 'action planning workshop' to assess food and agriculture vulnerability
- Combined risk and vulnerability assessment workshop for water resources

Village of Kaslo/ Area D

- Planning Priorities:
 1. Water Provisions
 2. Food Security
- Partnership with Selkirk College and UBC to model future stream flow projections and impacts
- Risk-based approach (Risk = probability x consequence)
- Assessment scales developed by local coordinator and steering committee
- 1 day workshop

Key Lessons Learned - Assessing Vulnerability, Risk & Opportunities

- Collaborate with surrounding communities, scientific organizations and academic institutions to obtain climate data;
- Ensure a good mix of local community involvement and involvement from experts and professionals;
- Keep the process simple and avoid complex terminology;
- Establish a framework and methodology for incorporating climate change opportunities;
- Adjust and modify the process to fit the needs of your community;
- Use a silent vote and Delphi technique to obtain risk and vulnerability ratings;
- Regardless of outcome, the process is an important learning and capacity building tool to help understand climate change impacts and mainstream climate change adaptation planning into strategic planning and daily operations