

# Managing and Governing for Resilience

## The Mackenzie River Basin Water Agreements

Lynn Kriwoken  
BC Ministry of Environment & Climate Change  
UC Berkeley May 9-11, 2019





# Takeaways

## The Mackenzie River Basin Agreements

- Not just about the science
- Embrace different worldviews
- Start with principles
- Interests not positions
- Balance learning and doing
- Start simply, simply start

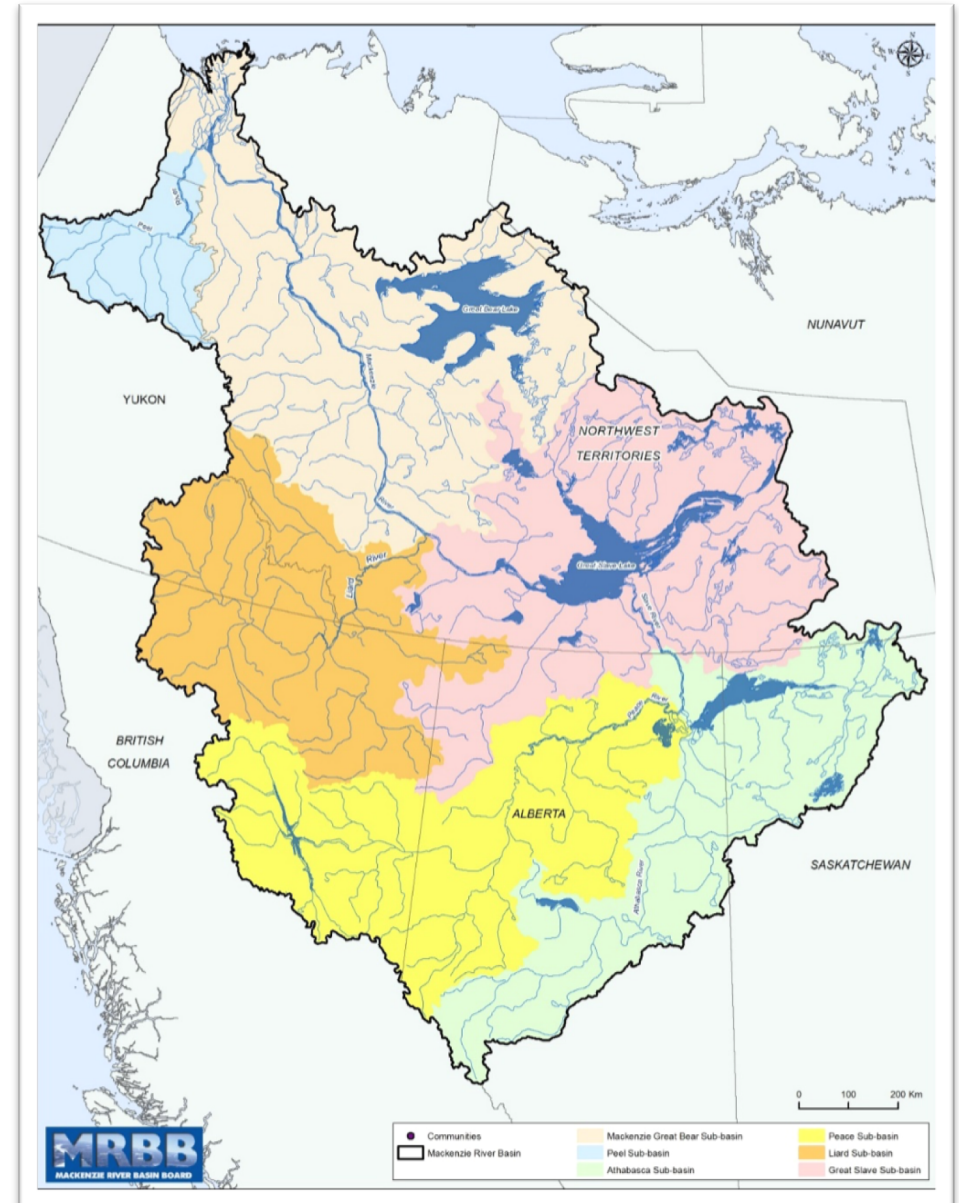






# Context

- Longest and largest river system in Canada
- Flows over **4,000 km**
- Drains **1.8 million km<sup>2</sup>**
- Different:
  - landscapes and ecologies
  - worldviews
  - development pressures
  - governance institutions

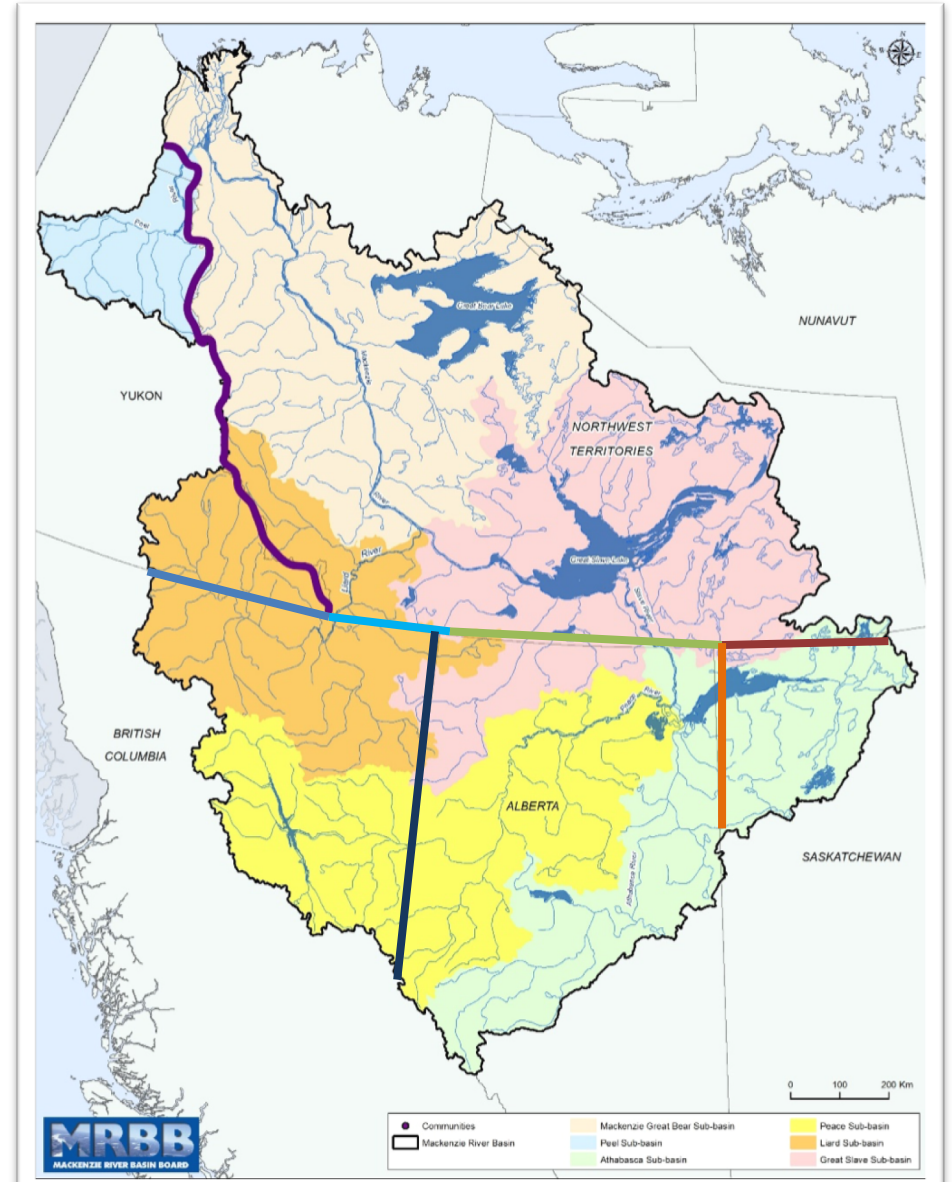






# The Master Agreement 1997

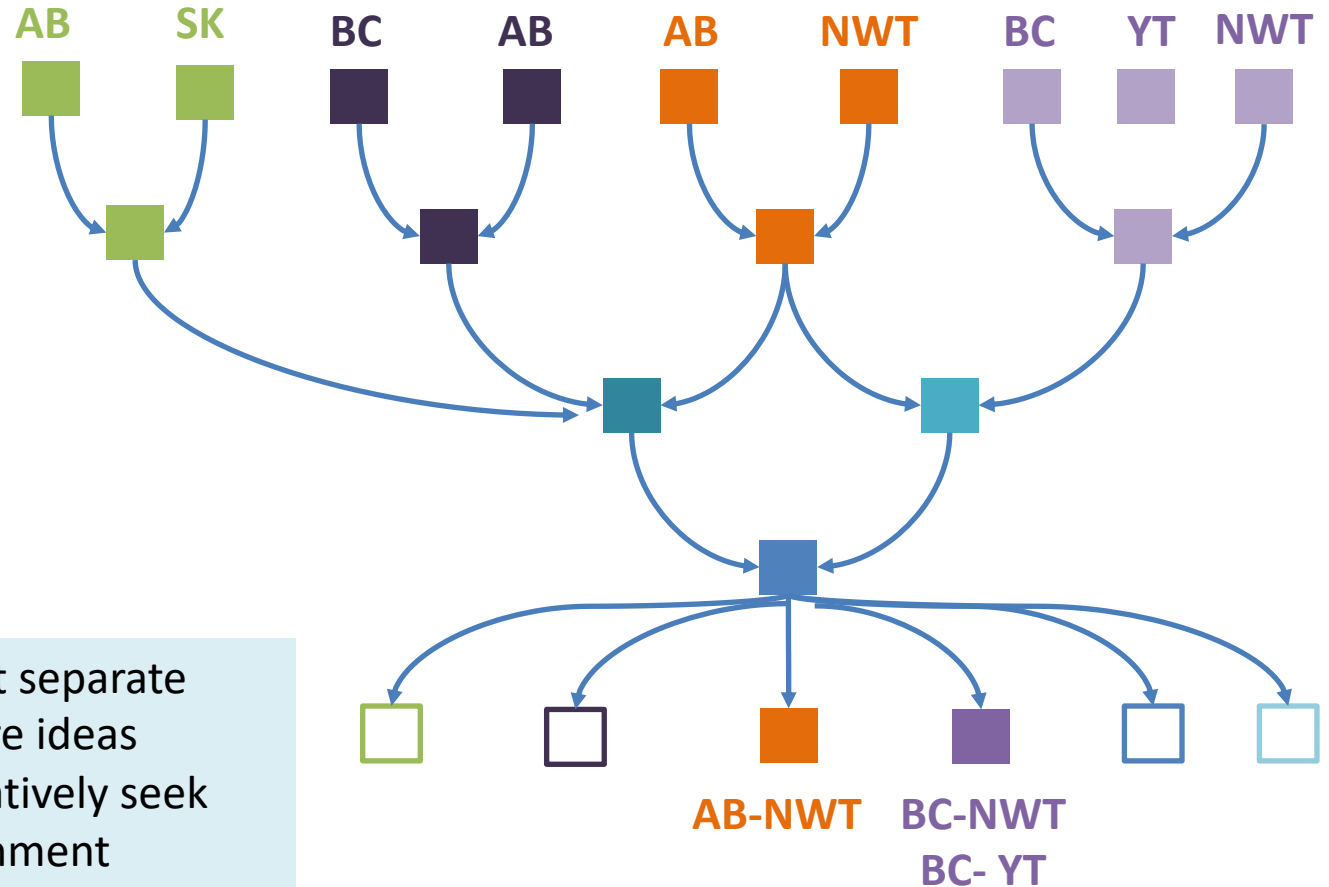
- Maintain the **ecological integrity of the aquatic ecosystem**
- **Manage sustainably** for present + future generations
- Consider the **needs and concerns of Aboriginal people**
- Respect **right to use water with no harm** to ecosystem
- **Early + effective** consultation, notification, information sharing
- **Cooperative + harmonious** issue resolution





# The Pursuit of a Basin Approach

- Start separate
- Share ideas
- Iteratively seek alignment
- Develop common core text
- Customize details







# The Bilateral Agreements

Contain **binding commitments** and define how governments will work together to implement the MA

## CONTENT

- Purpose
- Definitions
- Information Sharing
- Monitoring
- Research
- Indigenous knowledge
- Surface Water Quantity / Quality
- Groundwater
- Biological

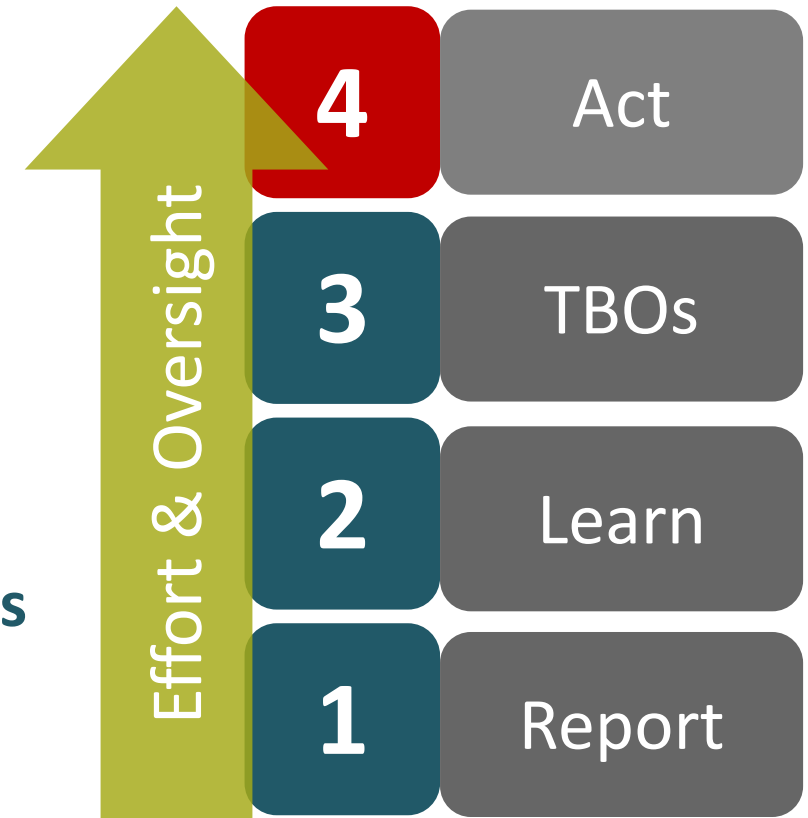
## PROCESS

- Jurisdictional Management
- Joint Management
- Risk Informed Approach
- Emergency Response
- Mitigation
- Administration
- Dispute Resolution



# Risk Informed Management (RIM)

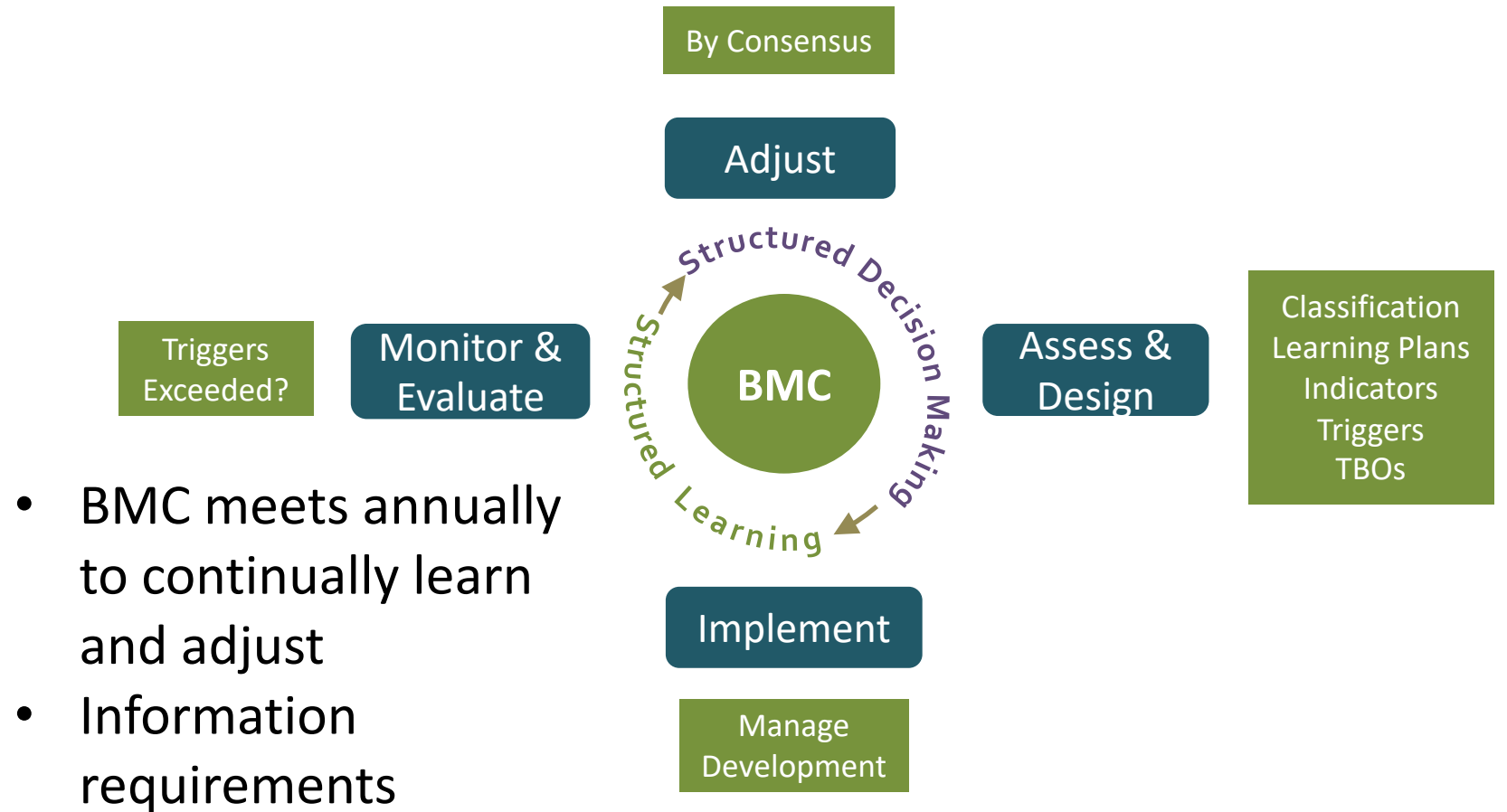
- Water management actions are **commensurate with risks to and uses of water**
- **Bilateral Management Committees (BMC):**
  - **Classify** each water body
  - Develop **learning plans**
  - Set **Transboundary Objectives**
  - **Monitor**, assess, adjust







# RIM and the Adaptive Management Cycle

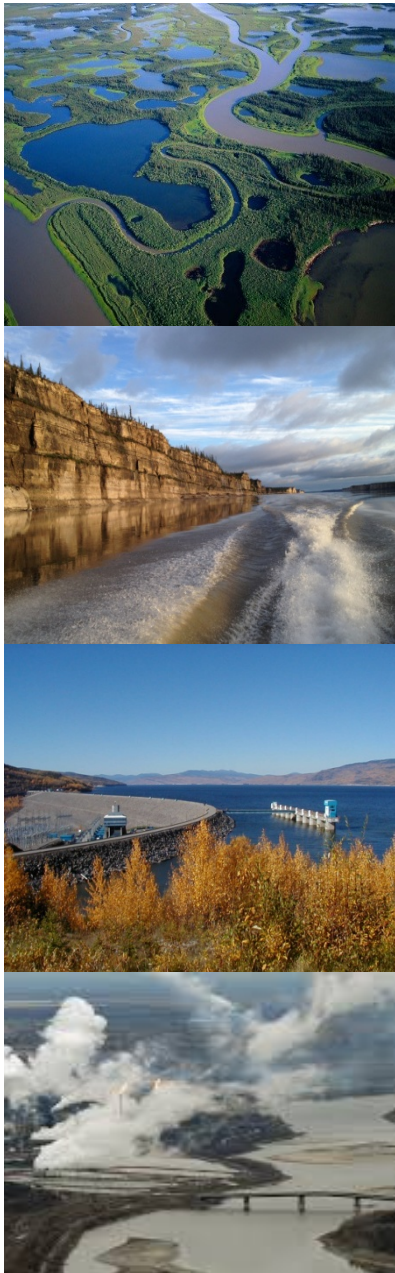




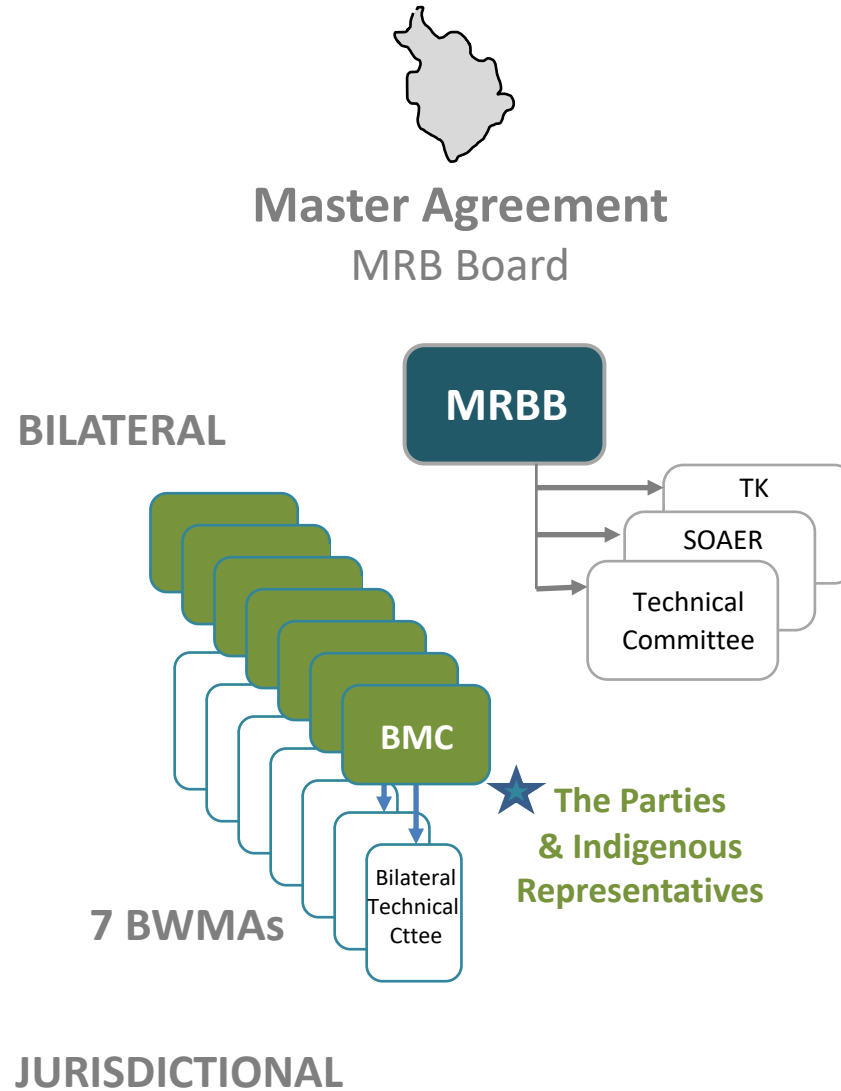
# Indigenous Knowledge

- BWMAs include practices to guide **inclusion of indigenous knowledge** in decision making under the **RIM approach**
  - Engage in dialogue to **better understand** the basis, scope, and meaning of indigenous knowledge and tradn'l use
  - Explore ways to **synthesize and blend** traditional and local knowledge and western science
  - Respect that **knowledge holders own their knowledge** and must provide their consent for its use
  - Adhere to **culturally appropriate methods** of presenting traditional and local knowledge





# Multi-scale Adaptive Governance





# Managing & Governing for Resilience

## The Mackenzie River Basin Agreements

- Multi-scale governance with a Basin perspective
- Ecosystem needs first
- Principled, interest-based process
- Pragmatic risk-based, adaptive approach
- Indigenous knowledge and decision processes
- Explicit learning plans
- Thresholds with proactive triggers
- Mechanisms to adjust to change
- Joint management at the BMC
- Formal and informal institutions





# Thank you!

**Lynn Kriwoken, B.A., M.R.M.**  
Executive Director, Water Protection & Sustainability  
BC Ministry of Environment and Climate Change Strategy  
[Lynn.Kriwoken@gov.bc.ca](mailto:Lynn.Kriwoken@gov.bc.ca)