Institutional Adaptability:

Navigating uncertainty, complexity and change

Erica Crawford Boettcher University of British Columbia BC Land Summit May 22, 2009

Outline

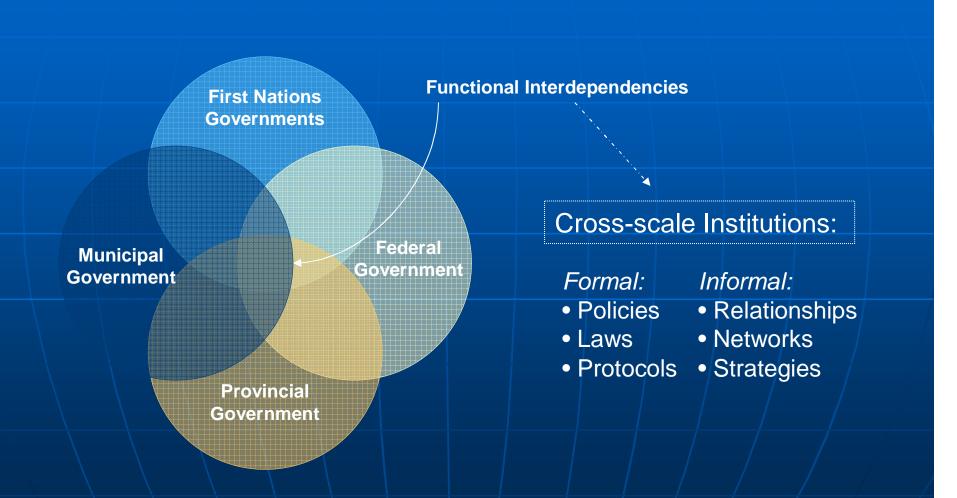
- In context
- Fraser River flood management: case study research
- Adaptability of flood management institutions
- Why does it matter?

The problem: institutions in the context of climate change

- Interconnectedness and complexity
- Nature and scale of change
- What does sustainability mean in a context of continuous change?

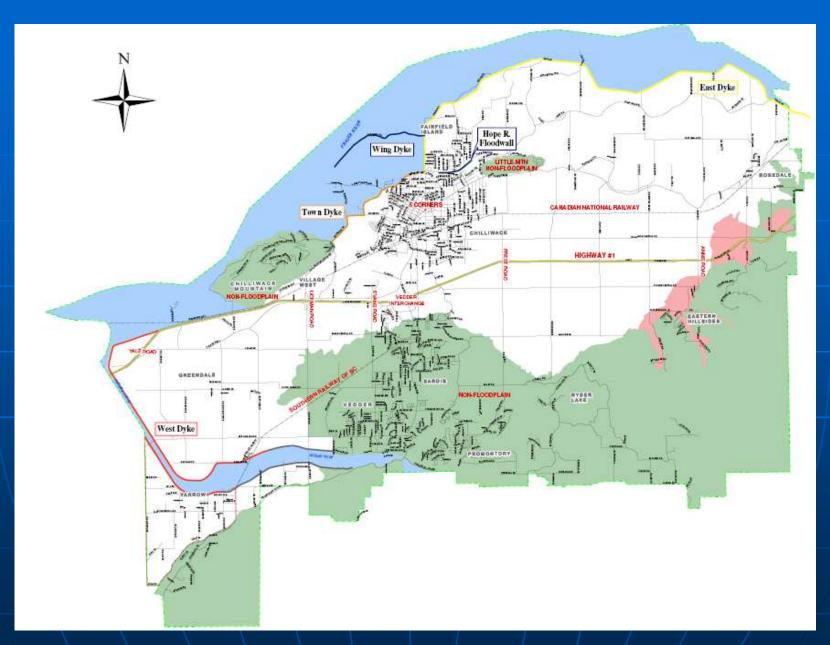
Planning for resilience

Overlapping jurisdictions



The Case: Chilliwack and Sto:lo First Nations communities

- Focus on response to freshet 2007
 - Chilliwack / Sto:lo region
- Methods:
 - Interviews
 - Questionnaires
 - Intergovernmental meetings
 - Document review



City of Chilliwack, 2007, www.chilliwack.com/main/page.cfm?id=346

Canadian Constitution Dept of Indian **Department Public** National **National** of Fisheries and Safety Defense Northern and Oceans Canada **Affairs** Canada **Ministry of Ministry of** Ministry of **Ministry** DFAA: Community **Agriculture Environment** of Public Emergency **Development** and Lands Indian Act: Management **Safety INAC** level of Act and service **Ministry of Solicitor** standards Land Title Act: Water **Aboriginal** Local Joint **General Stewardship** Government **Emergency Relations and INAC** Regional **Division** Preparedness Act Reconciliation BC Program Region (provincial Sto:lo committee...) New Relationship IFHM: Dike **Emergency** Tribal Maintenance Policy **Management** Council: **BC** Region Act: Flood **First BC/PEP** Sto:lo Strategic Plan; Hazard **Fraser Nations** Flood and **Nation** Statutes **Basin Emergency** Erosion Amendment Society Emergency Council Protection **Services** Act: River Program Act and funding Forecast regulations; prioritization; Centre Compensation MOU with Sto:lo City of and disaster FNESS/PEP: Community financial **Chilliwack** Standard assistance Chiefs and operating regulation; Councils guidelines for **BCERMS**: OCP: freshet Regional PreOCs; Emergency BC Flood Plan: **Band Council** preparedness Emergency dike Resolutions: bylaw: Fraser funding Emergency River flood plan; plans Floodplain regulation bylaw

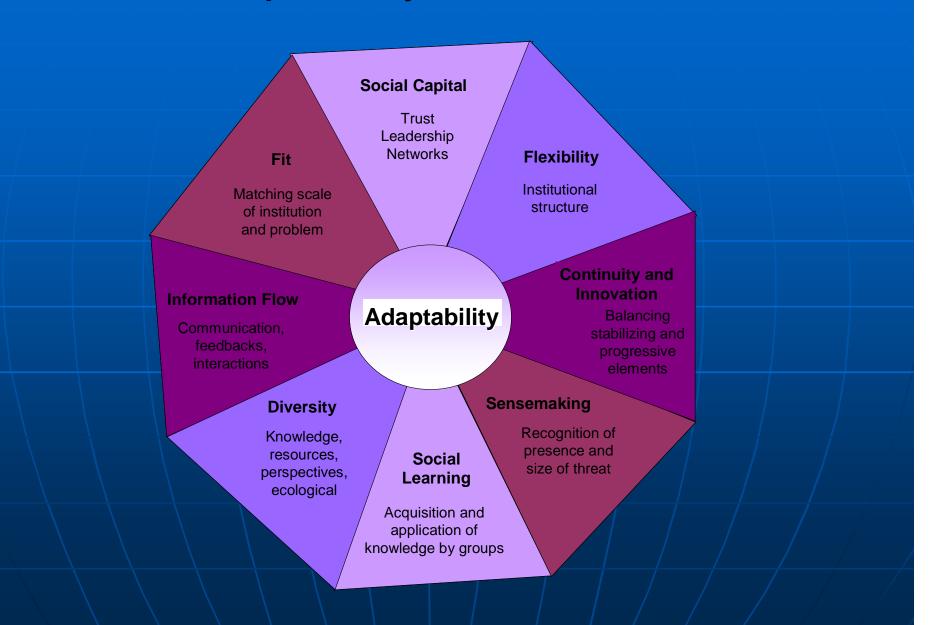
Structural Works

- Dike Maintenance Act
 - Approvals
 - Authority
 - O&M
 - Guidelines
 - Modelling / design levels
 - Monitoring / inspections
- Provincial funds
- Emergency Program Act / BC Flood Plan
- INAC funding / O&M
- Fraser Basin Council
- Chilliwack Flood Plan
- Municipal capital plan; funding sources
- Chilliwack Sto:lo community arrangements

Emergency Management

- BC Emergency Program Act (and regulations)
 - BCERMS / ICS
 - BC Flood Plan 2007
 - Funding
 - MOU (INAC/FNESS/PEP)
- Emergency Management Act (Canada)
- Joint EmergencyPreparedness Program (\$)
- FNESS / FBC
- Chilliwack Flood Plan
- LGA (emergency powers)
- Sto:lo Emergency Plans
- Band Council Resolutions
- Relationships (agencies / local govts / FN - municipal)

Adaptability Framework:



Continuity — Innovation

"The art of progress is to preserve order amid change and to preserve change amid order."

-Alfred North Whitehead

Emergency Management: combining structure and flexibility

- BCERMS
- •BC Flood Plan
- Relationships

Learning systems



Consequence Management Series
BC Flood Plan

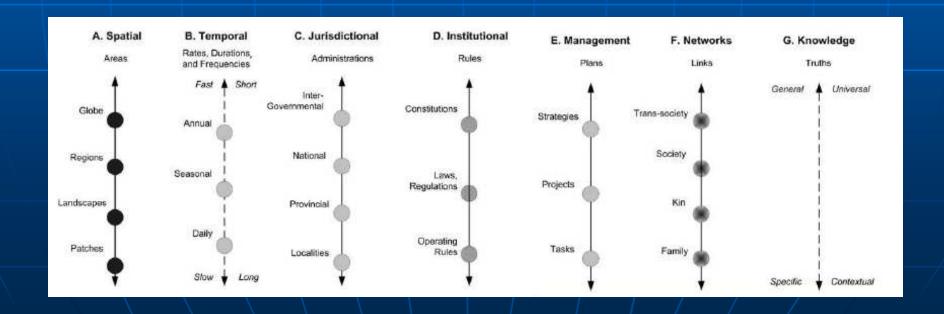
2007 Edition





Managing many boundaries

- Communication, translation
- Fraser Basin Council and First Nations Emergency Services



Diversity

Source of memory and innovation



Why care?

"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change"

—Charles Darwin

Thank You

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