POLIS Project on Ecological Governance
watersustainabilityproject

Thinking Like a Watershed – Watershed Governance in BC

A BRIEF OVERVIEW

Jan 2011

Oliver M Brandes

University of Victoria's POLIS Project

POLIS Project on Ecological Governance
watersustainabilityproject

Overview

- POLIS and some basic context
- Important trends in water
  – fulcrums for change
- Where we are …
- Where we might be headed – *Living Water Smart* and beyond
- Key challenges for reform – grappling with the tough questions

POLIS Project on Ecological Governance

- Research centre based at University of Victoria
- Established in 2000 by Eco-Research Chair of Environmental Law & Policy
- Where academic & policy research on sustainability meets community action

POLIS Project
on
Ecological Governance
University of Victoria

Ecological governance

- Embeds environment in all levels of decision making
  - Environment not an ‘add on’ but central
- Asks how we might foster circular systems – reducing demand on distant and local ecosystems

With the fundamental question:

What does governance shaped by the principles of ecological sustainability look like?

POLIS Project on Ecological Governance
watersustainabilityproject

Escalating Freshwater Crisis

- Growing, concentrated demands
  - urban, energy, agriculture
- Persistent pollution
  - untreated sewage
  - emerging pollutants
- Drinking water crises
  - FN, small communities
- Over-allocation
  - fish in the mud … increasing conflict
- Disruption of natural flows
- Invasive species
- Fear of bulk water removals

Water problem in a Nutshell

The trouble with water – and there is trouble with water – is that they aren't making any more of it."

- Marc de Villers, *Water* (2000)

POLIS Project on Ecological Governance
watersustainabilityproject

5 Important Trends

fulcrums for change

1 - Water as a "Strategic" Asset

- Pacific North West endowed with a rich BUT varied water resource - but not extra
- ***Ecology:*** Water performs a wide range of ecological functions – free of charge
- ***Economics:*** Water as a commodity and fundamental to community prosperity– licensed for agriculture, industry and municipal purposes
- ***Social:*** Water and society– recreation, aesthetics, urban water services - health and quality of life
- ***Spiritual:*** Water as inspiration - beyond physical, object of awe and the sacred

POLIS Project on Ecological Governance
watersustainabilityproject

2 - Climate Chaos

represents a clear and present danger (… but also opportunity!)

Mitigation is about **CARBON**

WATER is all about adaptation ***and*** mitigation

… but sustainability has to be about more than ***de-carboning***

3 - Governance

….the process of societal decision making…

Who -- What -- How

&

Accountability

Constitution of **Power**

POLIS Project on Ecological Governance
watersustainabilityproject

Govern*ment*

Govern*ance*

Why governance matters

- Builds social resilience to ***adapt to change***
- Enables ***innovation***, new approaches and experimentation
- Leverages expertise and ***additional resources*** for management
- Clarifies roles and responsibilities - ***increases accountability***
- Needed to protect and enhance ecological goods and services especially when ***power*** and decision making is diffuse and fluid
- Reduces conflict and increases public confidence

Governance alone cannot correct inadequate water management, but poor governance will almost certainly prevent effective management

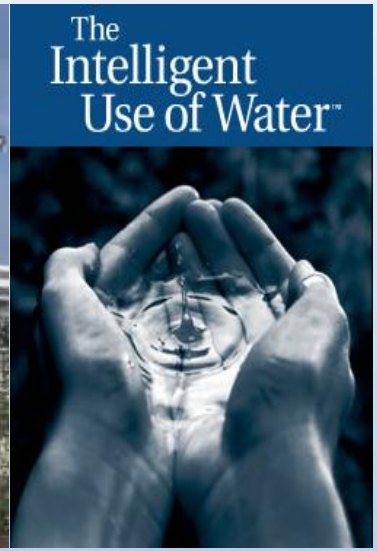
POLIS Project on Ecological Governance
watersustainabilityproject

4 - Watersheds, catchments and basins

… complexity and whole system thinking!

Water must be treated as valuable natural capital -
the foundation of functioning ecosystems and watersheds

5 - New conception of infrastructure



Lessons from elsewhere

- Emphasize collaborative engagement with a variety of stakeholders
- Focus on the watershed as the appropriate scale for water management (and governance)
- Need for formal and informal structures
- Secure resource for crucial activities
  - monitoring, compliance and enforcement, protection and restoration and investment in green infrastructure
- Embed conflict avoidance and resolution mechanisms

POLIS Project on Ecological Governance
watersustainabilityproject

Where we are

POLIS Project on Ecological Governance
watersustainabilityproject

In an ideal world

Federal Government

- **Engage (and enforce)** ***Constitutional*** **responsibilities** -- fisheries, navigation, First Nations, infrastructure, national issues, international engagement, trade and export
- **Good Science and data** -- climate change, hydro-ecology, adaptation, water use
- **Support institutions and processes** that build capacity and resilience through resources ($$ and human) and ensure best practices and information exchange

Provinces

- **Manage adaptively** -- Ecosystem based allocations and integrated land-water use in the face of a changing climate
- **Source protection and conservation** -- as priority water "infrastructure"
- **Address cumulative impacts** -- enabling local decision making and require whole system thinking
- **Share governance and enforce the rules** -- those affected by decisions should have meaningful input and say

Complex Water Governance

- Federal / Provincial politics
  - Shared & overlapping responsibility
  - Provinces hold bulk of power
  - Feds “gun-shy” - “pass the buck” mentality
- 20 or more Federal ministries, agencies, departments
- Provincial / Territorial policies and capacity vary
- First Nations water rights remain unresolved

BC's Water "Muddle"

- Lack of effective enforceable regulations
  - eFlows, conservation, groundwater use, pollution
  - Resource regulations (riparian areas etc.) downloaded on a sector basis
- Some tools exist … just not used
  - Watershed planning enabled in legislation
    Section IV - Water Act - No plans completed!
  - Drinking water source protection plans enabled
    - No plans produced!
  - Fish protection Act
    Few (15 of 1000s) streams covered

BC's Water "Muddle" cont.

- Lack of integration of land and water use planning
- Multiple agencies responsible for water management in individual watersheds
  - Crown lands- multiple provincial government agencies
  - Private lands- multiple local government jurisdictions
  - Fisheries- federal government
- Decisions are highly discretionary, uncoordinated and not related to ecological function - ***Lords of Yesterday***

BC's Water "Muddle" cont ll.

- Does not effectively recognize aboriginal rights and title
- No overall authority for monitoring ecological indicators and managing watershed as whole systems - who is minding the store?
- Limited public participation
- No independent oversight
- Jurisdiction fragmentation
  - Many players, little coordination

Canadian Experiences with Water Governance

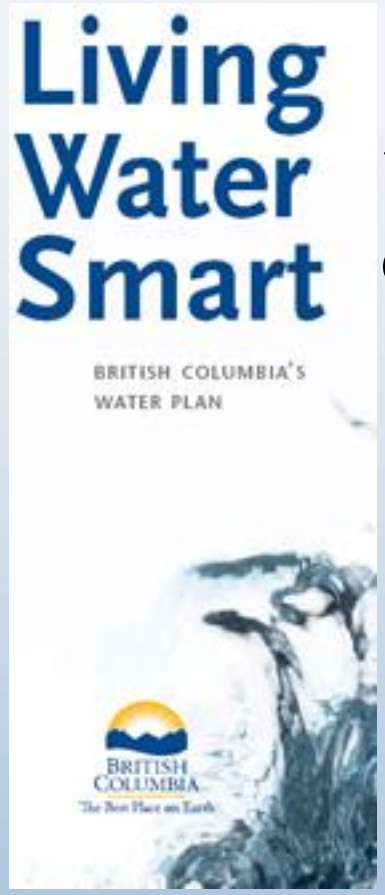
- History of top-down, state-driven regulatory approaches
- Various provinces – Quebec, Ontario, Alberta – have begun formal move to watershed governance approaches
- Some experimentation with markets
- Recent emphasis on collaborative approaches and partnerships
- Trend towards increased sharing of responsibility and authority

Where we are headed?

POLIS Project on Ecological Governance
watersustainabilityproject

Governance and Water Act Modernization in British Columbia

The Need for Whole System Change
A BRIEF OVERVIEW

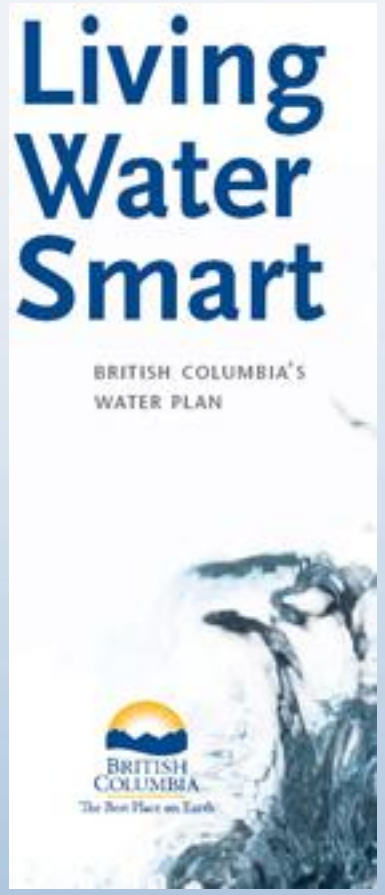


The *good* …

√ Not just about *provincial government* emphasizes:

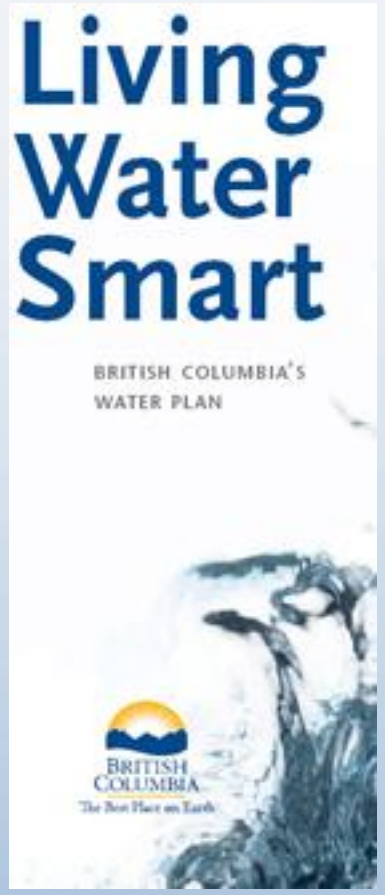
- climate change adaptation
- stream health and proper watershed function
- conservation and efficiency
- integration of land and water management

… a potential model



… the *bad* and the *ugly*…

- Relies heavily on voluntary actions -- not enough $$$s, people or resources to follow through on commitments
  - *does rhetoric match reality?*
- Minimal capacity to deliver even existing commitments - yet alone new promises
- No formal mechanism for accountability and reform of governance and institutions (does not build social resilience)
- Symptom of a much broader problem - no whole system/whole watershed approaches



… and the *opportunity*

Water Act Modernization!!

- By 2012, water laws will improve the protection of ecological values, provide for more community involvement, and provide incentives to be water efficient
- Legislation will recognize water flow requirements for ecosystem and species

POLIS Project on Ecological Governance
watersustainabilityproject

What does a modern act look like?

1. Protect stream health and aquatic environments through ***legislated instream (or environmental) flows***
2. Provide water for the future with ***watershed protection plans.***
3. Improve governance through ***oversight*** and ***meaningful public participation***
   - ***Respect First Nation's and Aboriginal Rights***
4. Update the water allocation system to ***embed conservation, equitable sharing*** and ***ecosystem-based management***
5. Regulate groundwater use

POLIS Project on Ecological Governance
watersustainabilityproject

Setting a New Course

- Water governance & law reform initiative at UVic's POLIS WSP Project
- Based on discussion paper (with Deb Curran – ELC) for BC Ministry of the Environment – Water Stewardship Division
- Compares 3 possible governance model for water management in BC
- Assess strengths and weaknesses
- Identifies reform priorities
- Contributes to dialogue on governance reform

Formalized collaborative watershed-based governance

- France's Water Agencies and "Water Parliaments" (European Union)
- Murray-Darling Basin Initiative (Australia)
- Conservation Authorities (Ontario)

POLIS Project on Ecological Governance
watersustainabilityproject

Key context and drivers

French Water Agencies

- *EU Water Framework Directive*
- History of citizen watershed level engagement

Murray Darling Initiative

- COAG and *National Water Reform*
- High H2O IQ

Ontario Conservation Authorities

- Flood Protection (Hurricane Hazel)
- Source Protection and *Clean Water Act* (Walkerton)

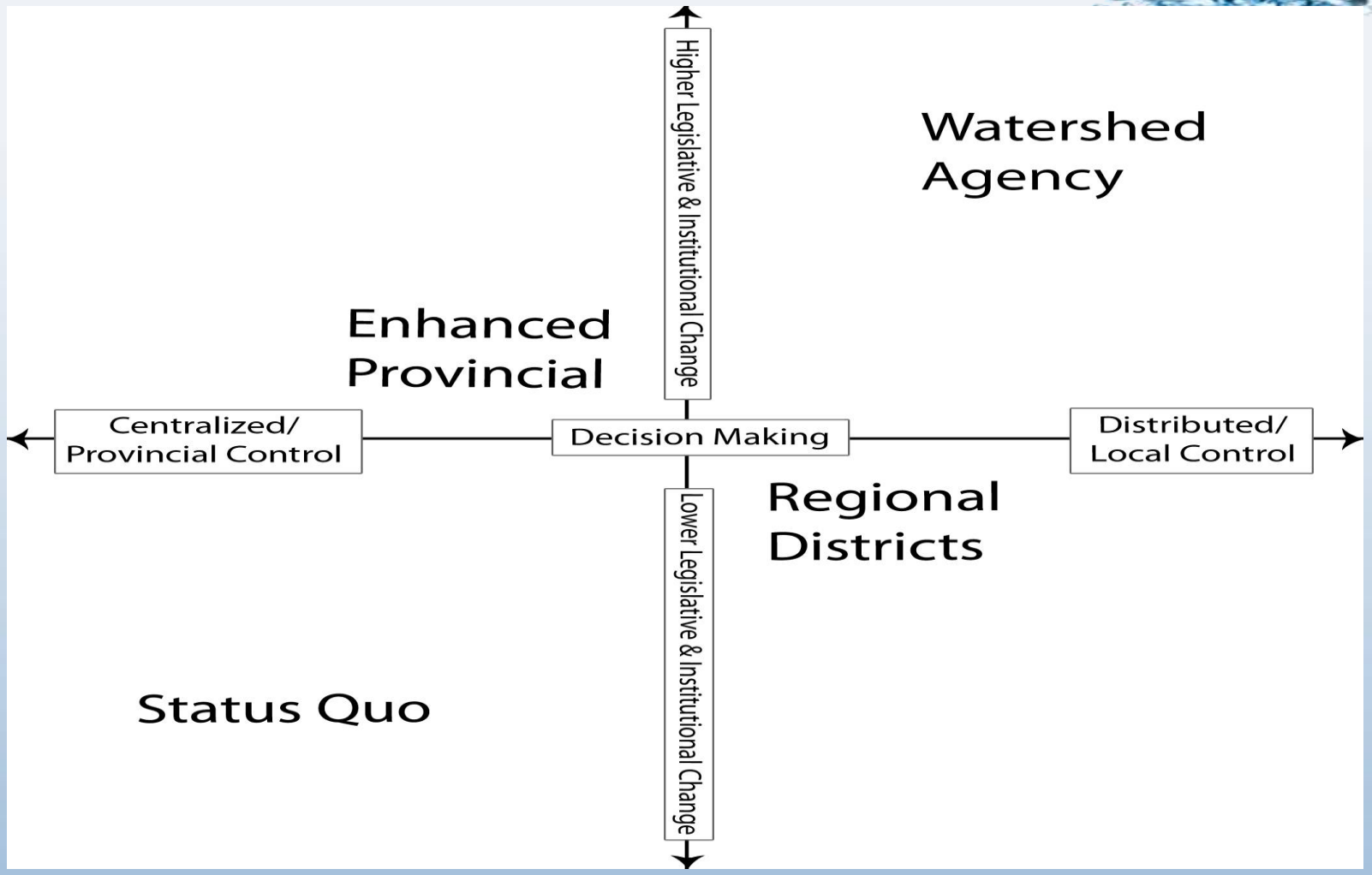
POLIS Project on Ecological Governance
watersustainabilityproject

Comparing with BC

Key Attributes	3 EGs	In BC?
Senior government direction and engagement	√	**X** - currently ad hoc/varied across province and feds in practice *?Living WaterSmart* new direction?
Decentralized power including accountability and responsibility	√	**X** - resource and watershed decisions centralized
Manage cumulative impacts	√	**X** - currently sector by sector licensing and regulation with minimal ecosystem monitoring
Independent oversight and implementation support	√	**X** - not specific to water or watersheds
Resources and funding	√	**X** - water (and watershed) resource mgmt generally under-funded

POLIS Project on Ecological Governance
watersustainabilityproject

Reform Options



POLIS Project on Ecological Governance
watersustainabilityproject

Watershed Agency

Capacity	"enabling legislation" and taxation/resource rents powers
Core activities	Visioning and monitoring Planning and source protection Restoration and infrastructure programs Awareness/public engagement
Build on existing tools: *Regional Growth Strategies* *Official Community Plans*	Opt in-able: -Allocations (including priority of use) -Regulation of quality standards -Input into resource and land use decisions
Decision making	blend of local elected, FN/Provincial/Federal appointed and representation across watersheds
Senior Government role	-Set minimum standards for eFlows, environmental and drinking water quality and accountability -Oversight, training and best practice exchange -Independent auditor with investigative powers

POLIS Project on Ecological Governance
watersustainabilityproject

Watershed Agency

Strengths	Weaknesses
Increased social resilience and adaptability	New legislation (and in some cases new institutions) needed
Watershed context and function overt in decision making	Political will and institutional commitments required
Ability to leverage expertise and resources	Some provincial resources (especially initially) needed
Highly collaborative – those affected have a say ….	Transition to new system increases uncertainty

POLIS Project on Ecological Governance
watersustainabilityproject

Main Challenges for Reform

… no easy answers …

POLIS Project on Ecological Governance
watersustainabilityproject

Balancing
harmonization vs *subsidiary*

Devolving vs Downloading

Explicit collaboration requires resources and support - *but* how to ensure legitimacy and accountability?

What level of integration?

… across water (likely)

… across sectors (much more difficult)

Enabling institutions and laws that *build* resilience - social and ecological

The need for "postnormal" (uncertainty) science and policy –

emphasize "no regrets" strategies

Institutions (like children) take time to mature and develop

POLIS Project on Ecological Governance
watersustainabilityproject

Role and extent of *market mechanisms*

Spectrum of market mechanisms

- Chile active trading and constitutionally protected water rights
- Alberta and Australia have embraced water markets with varying degrees of active water trading (but with some basic environmental considerations)
- California markets balanced by public trust doctrine and Endangered Species legislation
- South Africa and the EU more cautious, emphasizing constitutional reforms and explicit social priorities

Where to begin

- Change public attitudes that water is a free good to water as a strategic natural asset and a ***public trust***
- Emphasize conservation, stewardship, and reuse – ***new concept of infrastructure***
- Attend to cumulative impacts -- ***whole system thinking***
- Set minimum standards and ***enforce the rules***
- Engage communities (those affected) in water management and decisions -- ***shared governance***
- Enable decision making at the watershed scale -- ***ecology must matter***
- Establish overall audit/oversight -- ***accountability***

Prosaically simple

- use less
- use what we take more productively
- learn to share and resolve conflicts
- leave enough water in the system to ensure to ensure healthy watersheds and proper function

POLIS Project on Ecological Governance
watersustainabilityproject

The challenge for us all …

In a healthy society, economy always follows ecology, and education precedes them both

Ken Carey
Starseed
The Third Millennium, Living in the Posthistoric World
Harper, San Francisco,1991