

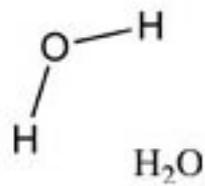
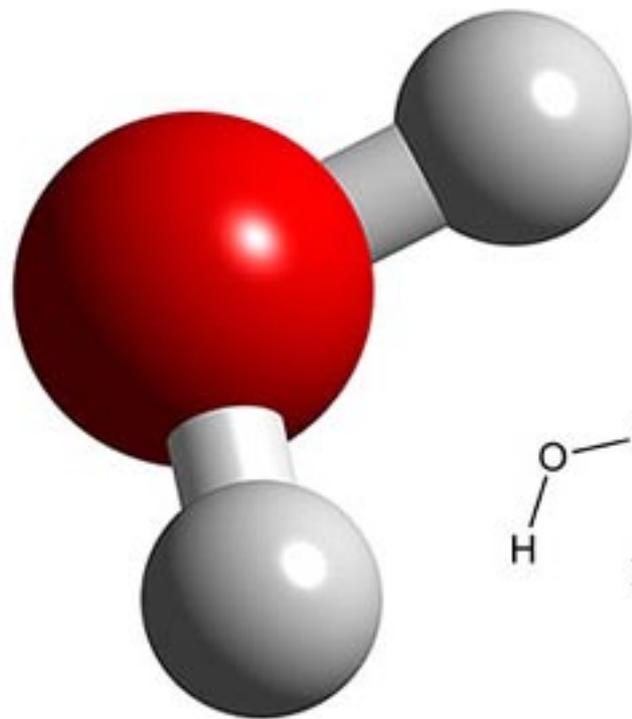
A BOLD PREDICTION:  
...the future *is* shared decision making at the  
watershed level ....  
- not *IF* but *WHEN!* -



# Fresh water: Looming Crisis or has the Crisis Loomed?

- 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 –loss of natural capital
- Invasive species
- Fear of bulk water removals





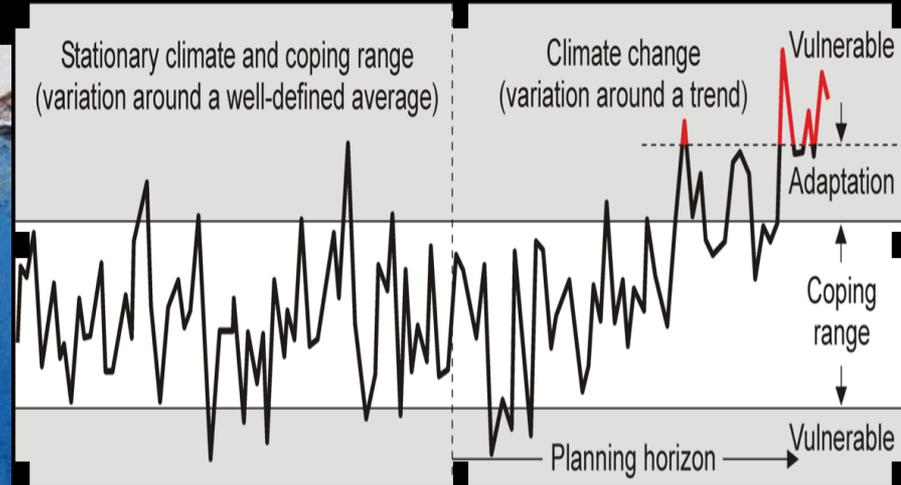
$\text{H}_2\text{O}$

# Canadian Experiences with Water Governance

- History of top-down, state-driven regulatory approaches
- Recent emphasis on collaborative approaches and partnerships
- Trend towards increased sharing of responsibility and authority
- Some experimentation with markets (primarily in the west)
- Strong commitments to new approaches and formal move to new modes of shared or collaborative governance by Provinces
- Watersheds long accepted as the scale for *MANAGEMENT* – increasingly acknowledged as critical for *GOVERNANCE*

# Climate Change

If climate change is the shark...



...water  
will be  
its  
teeth!



*Discussing Water Rights, A Western Pastime*



**Uncertainty**

**Risk**

**Resilience**



# Paradigms of Water Management



# New Conception of Infrastructure





# Water Law Reform: Lessons from Around the Globe

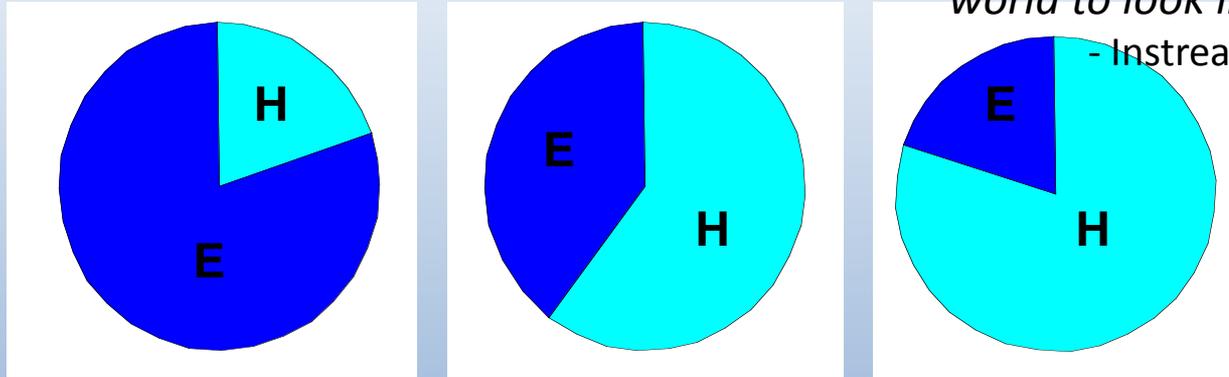
- Senior government direction and engagement
  - *enablers of local solutions not “top down” managers*
- Decentralized power including clear accountability and responsibility
  - *Emphasize collaborative engagement with a variety of stakeholders and communities*
- Attention to cumulative impacts and ecological function
  - *Rights for Rivers?*
- Embeds conflict avoidance and dispute resolution
- Those impacted have a say in decisions
  - *Respecting First Nation and Aboriginal Rights*

# Allocating water in the 21st Century

*"It actually boils down to a value judgment of what we want our world to look like."*

- Instream Flow Council

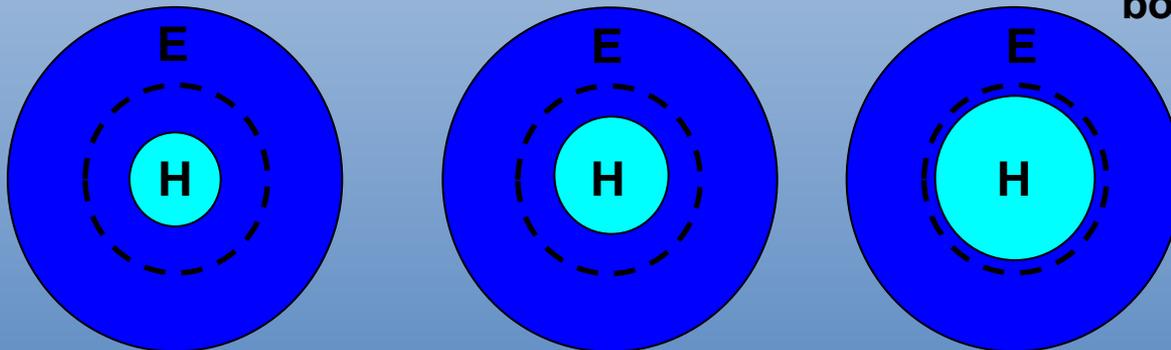
**Traditional  
Water  
Management**



Time

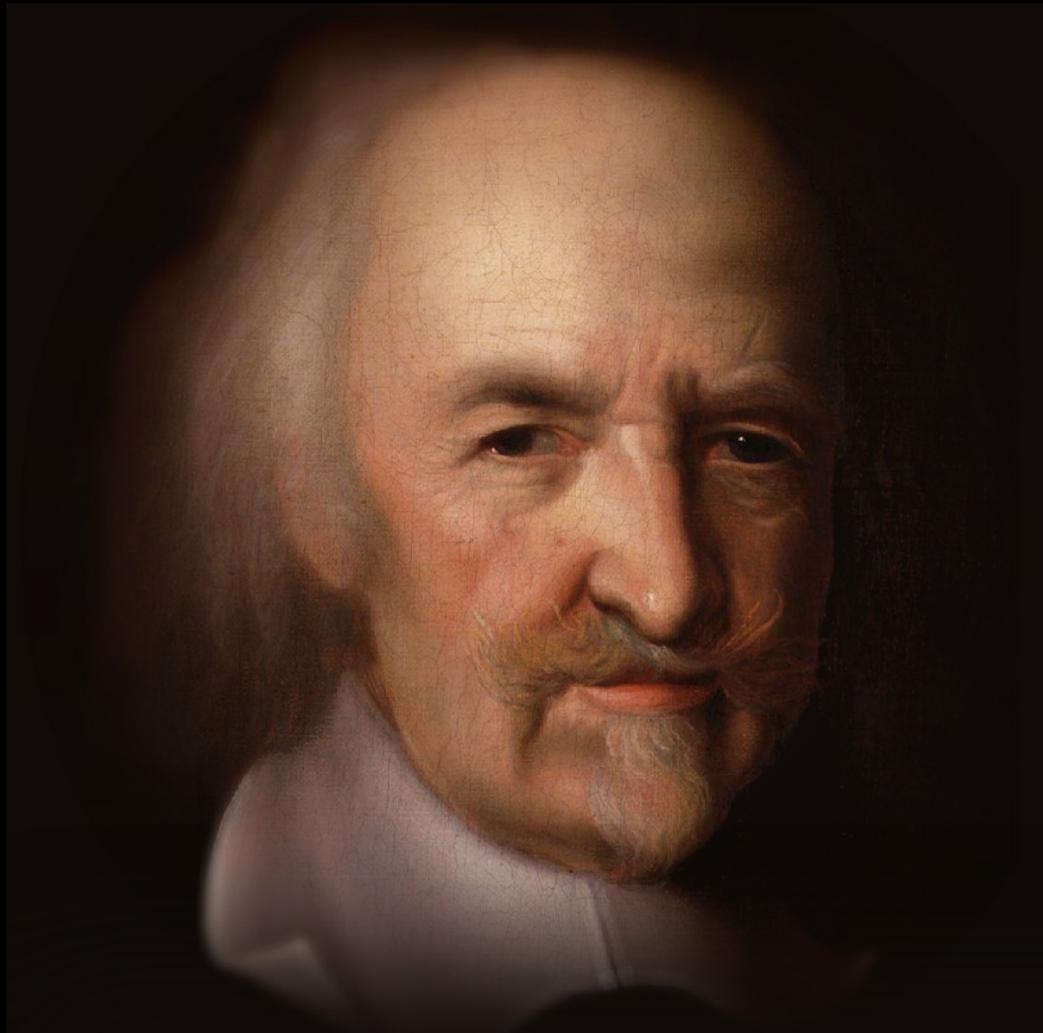
----- Sustainability  
boundary

**A 21<sup>st</sup>  
Century  
Approach**



Time

Adapted from: Postel & Richter, 2003



"The beatings will continue  
until morale improves."

- Thomas Hobbes of Malmesbury (1588-1679)

*Leviathan*

# ***Government***



# ***Governance***



Photo: J. Wong

# Watersheds as a critical scale for **Management, Policy *AND* Governance**

# Re-Thinking Watershed Governance

Government is critical to governance, BUT governance is broader than government

- Engage both government and other key actors – civil society, first nations, business and industry, community

Both formal and informal structures

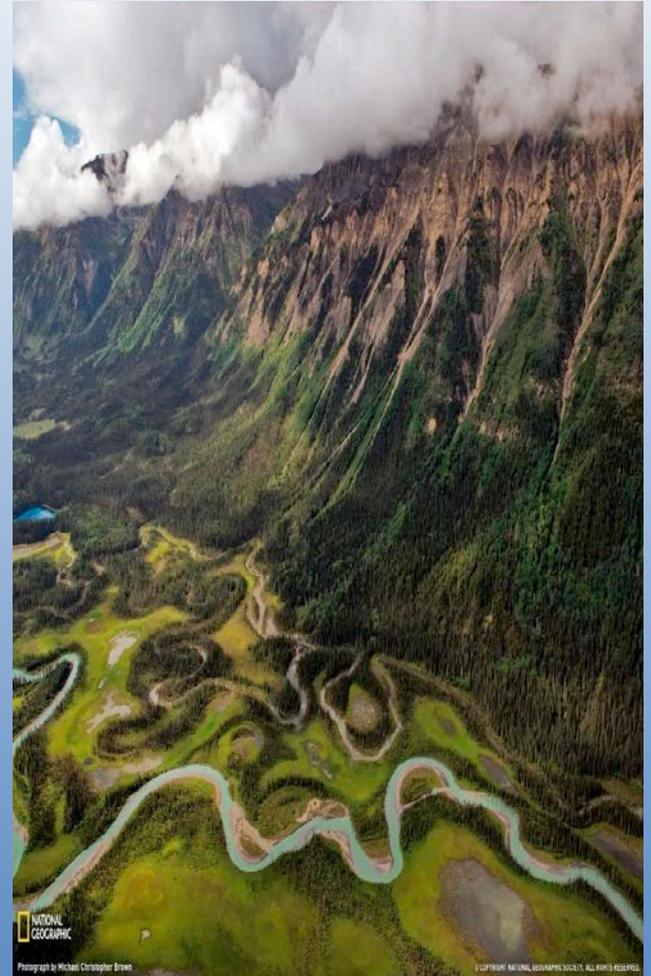
- Legislative (regulatory) and persuasive (influence)

Shift from managing watersheds to managing people in watersheds

- Social problem not a technical problem and emphasizes SOCIAL and ECOLOGICAL RESILIENCE

Achieve long-term sustainability of watershed resources

- Formally Integrate natural ecosystem processes within decision-making



NATIONAL GEOGRAPHIC

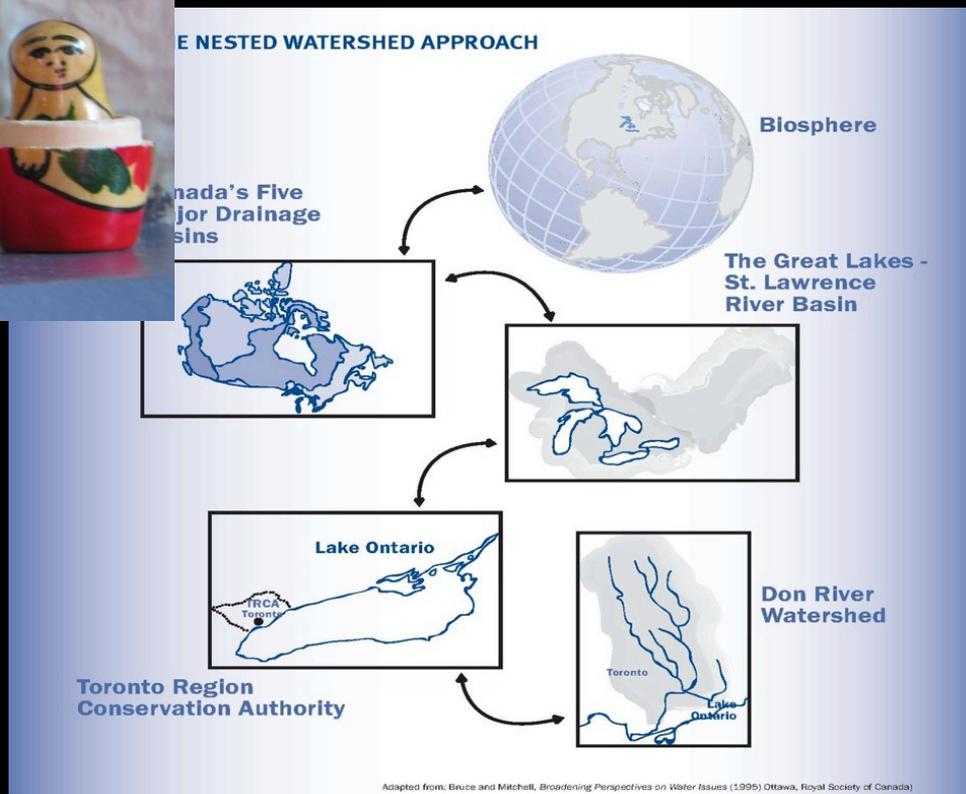
Photograph by Michael Christopher Brown

© COPYRIGHT NATIONAL GEOGRAPHIC SOCIETY. ALL RIGHTS RESERVED.

# “Nested” Systems



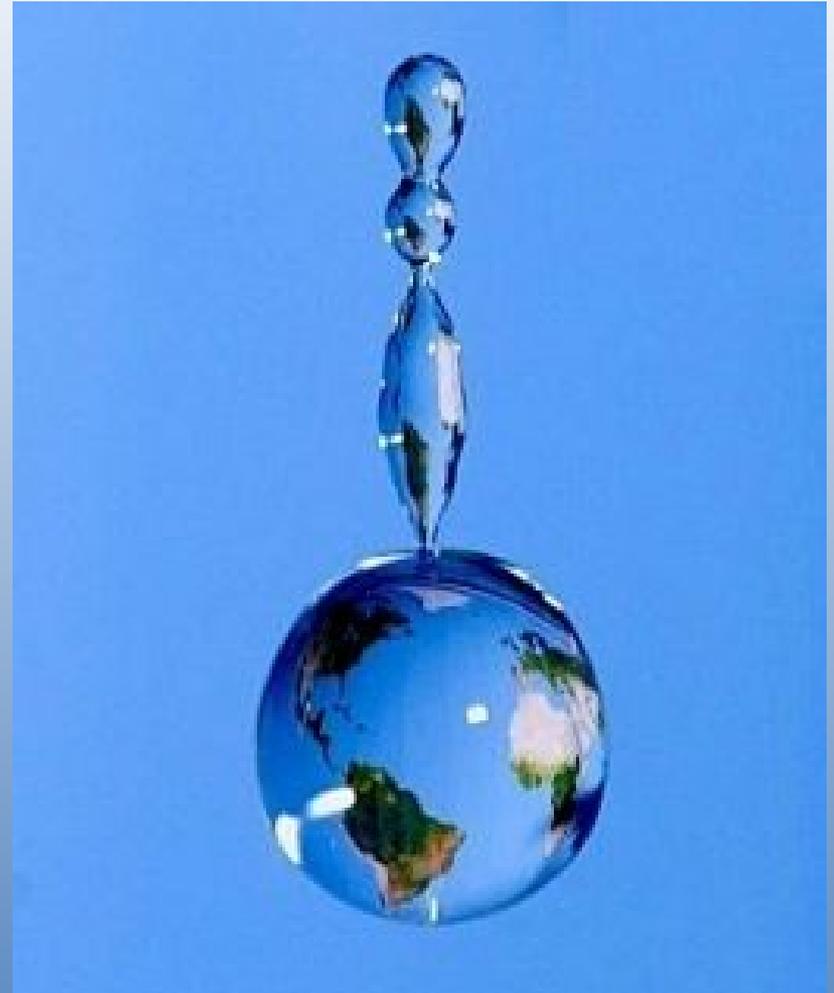
## Thinking Like a Watershed





# 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



# 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