



Blue Ecology: A New Attitude

Embrace a water-first approach to planning human interventions in the environment.

Git^usan: People of the River of Mist



"The blood that runs through the veins, are the rivers that run through Mother Earth. People need to understand that, without that life giving water, there will be nothing."
(Chief Gwininitxw, Yvonne Lattie, Gitxsan Nation)



Outline



Acknowledging Elders



What is water?



Blue Ecology's Vision



Path One: Status Quo



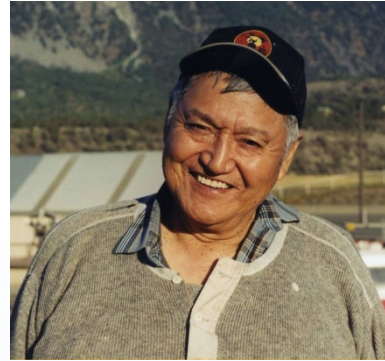
Path Two: Blue Ecology's Attitude Switch



Blue Ecology's Calls to Action



Acknowledging Elders



What is Water?

A Deceptively Simple Question...

~~Hydr~~HydræGreek root for “water”

Ethnographic Research

- Seven Elders from Seven Nations
- Twenty Years of *Independent* Research
 - Ethical and consent based
 - Peer reviewed
 - First Nations reviewed

Water is a chemical compound consisting of two hydrogen atoms and one oxygen. The name water typically refers to the liquid state of the compound
(Chemistry @About.com).

Water is the essential lifeblood of our planet, with the power to generate, sustain, receive and ultimately unify life (UNESCO-IHP Expert Advisory Group on Water and Cultural Diversity).

Social Science Research

Peer Reviewed and First Nations Community Reviewed



Poetic Expression

Very similar to First Nations storytelling traditions



Annie "Paingut" Peterloosie

Water and Icebergs

The icebergs are very big.
They are good drinking water from the sea salt.
They are not to be played with.
They are not to be shot at. They are not to be
broken down,
when played with.

Our Inuit ancestors
Told us not to break them
And near the edge of the ice
Were told not to camp there
Because it might break
Inuit were told not to sleep overnight

And they were told not to urinate
Because it would soil them and are vulnerable
It does not want to get dirty

***Because it is believed that there are people in it.
It is true.***



Mark Mallory

Living Entity - Sentient Being?

A characteristic of a sentient being is its ability to form relationships with other beings.

ERIC REGULY
EUROPEAN BUREAU CHIEF
COURMAYEUR, ITALY

Ice scientists talk about glaciers as if they are animate objects. They call them "frozen rivers." They "breathe in and breathe out" - that is, they breathe in snow and, when the temperature rises above freezing, breathe out water. Glaciers have personalities and are always on the move.

They live and die, and when they die, the scientists go into a sort of mourning, as if they have lost a dear friend. In August, scientists held a mock funeral for the Okjokull glacier, the first Icelandic glacier whose disappearance has been directly attributed to climate change.

Scientists who monitor the



Globe and Mail
October 31, 2019

Comparison of water views

INDIGENOUS

- Integrative
- Water unifies life
- water has a spirit (biotic)
- water is a central value, the heart of an ecosystem pumping the life blood
- Groundwater is very important: can offer spiritual and healing power

WESTERN SCIENCE

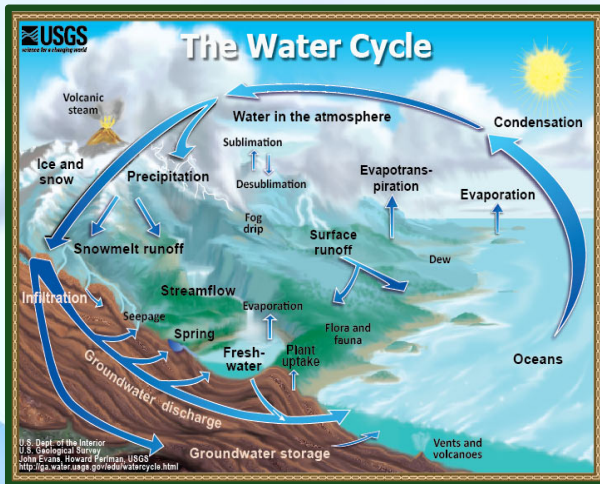
- Taxonomic/distributive
- Hierarchical
- water is abiotic
- water is a physical material that assists the living organisms in an ecosystem
- Rarely a value component (VC)

Two Water Worlds



Blue Ecology Water Cycle

- Companion to Western Science's model



Western Science's Water Cycle

- A Companion to Blue Ecology Water Cycle (USGS version)

Blue Ecology Vision

Sustainable Survival: *survival with dignity*



Vision:

An ecological philosophy, which emerged from interweaving Indigenous and Western thought, that acknowledges water's (i.e. fresh and salt) essential rhythmical life-spirit and central functional role in generating, sustaining, receiving and ultimately unifying life on Earth Mother.

Water- First

The highest sustainability test is water-first: planned development (e.g. real estate, urban planning, forestry, agriculture, mining, oil and gas extraction) cannot impede the functional delivery of quality water to ecosystems in a healthy rhythm.

Guiding Principles of Blue Ecology

- a) Spirit:** water, fresh and salt, is a living spirit.
- b) Harmony:** harmonious sustainability in a functional rhythm that engenders healthy bodies and ecosystems.
- c) Respect:** water through ceremony, education and giving back, else Earth Mother will retaliate by taking water away.
- d) Unity:** water has the ability to connect and unify humans because of our common reliance on this basic unit of existence. It is a proto-interest.
- e) Balance:** restrained and measured water withdrawals in combination with and giving back (i.e. restoration, monitoring, or ceremony) to watersheds and water.

Path One: Status Quo



Climate change = transformation of water

Earth Mother's heart is beating at a faster rate, and pumping, transforming water faster!

MOUNTAIN LEGACY PROJECT

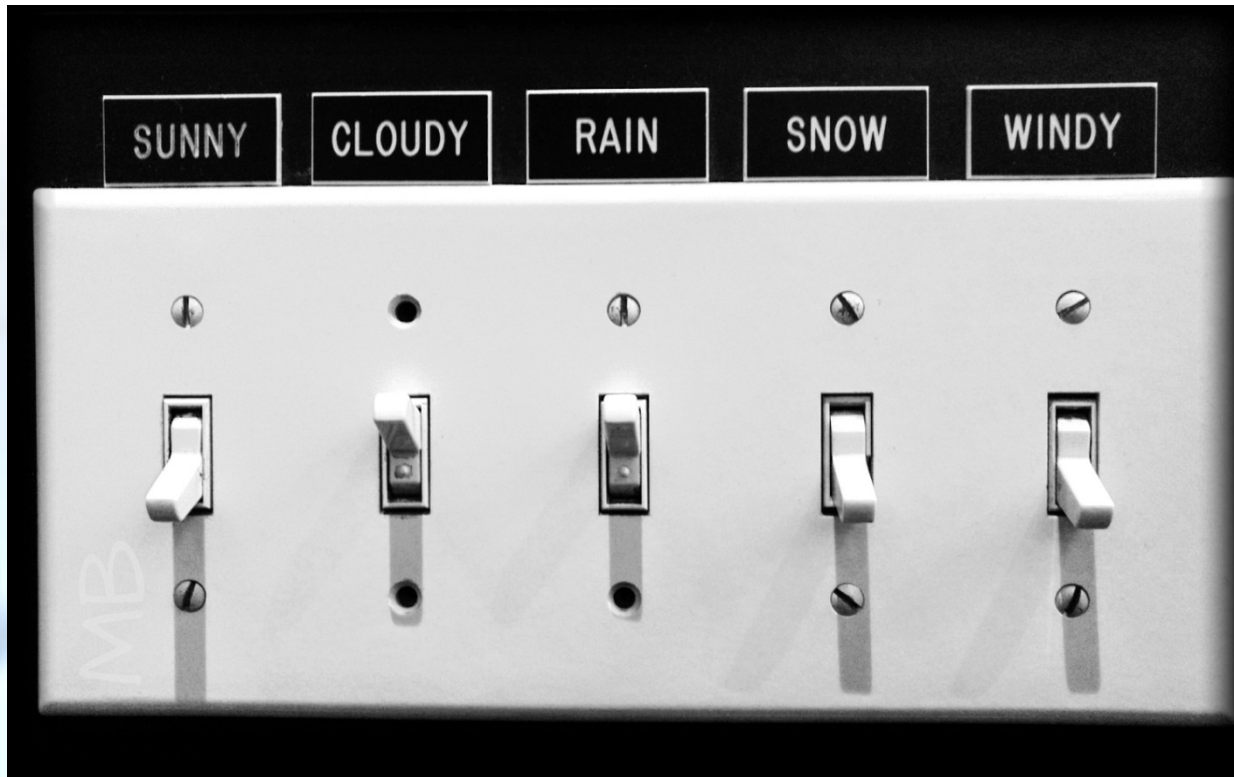
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Path Two: Blue Ecology



Switch our Attitude



What is Attitude?

A collection of values, theories, philosophies, beliefs and principles that motivates and influences

Water Attitude

**Living entity,
biotic**



**Non-living,
abiotic**

Examples of Attitude Change

[New Zealand river granted same legal rights as human being | World news | The Guardian](#)

[Ganges and Yamuna rivers granted same legal rights as human beings | World news | The Guardian](#)

Collaboration Attitude

**Interweaving
Cultural
Knowledge**



**Western
Science
Only**



Interweaving

“Interweaving, at the microscopic level, of two different materials in order to get something harder, tougher, yet more elastic than either component alone.

Nature has employed composites in all sorts of biological structures.”

Oliver Sacks (2002, pg 108)

Interweaving

- *Collaborative process* where apparently contradictory ways of knowing water, such as Western Science and Indigenous Knowledge, are brought together as *coexisting threads* to produce a new cooperative theory called Blue Ecology.
- Working in *tandem*

Action 1: Blue Ecology Education

Shape our attitude toward water as a foundation for reconciliation and addressing climate change.



Where does water come from?
by Judy Weyer, Grade 9,

Mainstreaming Blue Ecology in B.C

"Blue Ecology is an idea whose time has come. Commencing in 2016, the Partnership for Water Sustainability introduced Michael Blackstock's Blue Ecology work into the local government setting because we saw the need to look at hydrology differently to interweave First Nations and Western thought.

"If British Columbia water managers would embrace the Blue Ecology ecological philosophy, our communities would become more water-resilient, and we would successfully adapt to a changing climate."



Kim A Stephens
M.Eng., P.Eng.
Executive Director



the partnership
for water sustainability in bc

Climate Change Attitude

**Water's
Rhythm
and
Movement**



**Shock and
Yawn**

UN-Water Policy Brief on Climate Change and Water

POLICY AND ANALYTICAL BRIEFS

12 July, 2019

The global climate crisis is inextricably linked to water. Climate change increases variability in the water cycle, inducing extreme weather events, reducing the predictability of water availability, affecting water quality and threatening sustainable development and biodiversity worldwide.

Climate Change and Water
UN-Water Policy Brief

Switch to Blue Ecology

- Blue Ecology is a new water-based ecological *theory*, which interweaves cultural *philosophies, beliefs and principles* to elevate, into a central role, the value that society places on water.
- Blue Ecology promotes a new *water-first attitude* towards water, climate change and environmental planning.

Action 2: Water Leadership

Elder's Question:

What are you going to do about it?

Hope is active leadership!

Water Leadership: **Prévoyance**

A leadership ability: to prepare for the unexpected, in a world of uncertainty and danger, while maintaining your principles. A mindset of learning to make sound judgements over the long run on the basis of imperfect knowledge.

(David Hackett Fischer's Champlain's Dream)

- *Operational Principle* approach rather than prescriptive

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Operational Principles

1. **Recognize** that access to water is a universal and basic human right;
2. **Communicate** and prominently display the Blue Ecology vision and principles;
3. **Develop and monitor measurable indicators** to audit the implementation of Blue Ecology principles; and practices. Invest in real time water quality and quantity measurement systems;
4. **Embrace the principle of subsidiarity**: Involve local people, especially the Elders and youth, as water caretakers, at the smallest effective watershed management unit;
5. **Mentor and train local caretakers** in the Blue Ecology approach to work hopefully & collaboratively;
6. **Celebrate water** in architectural design, urban planning, artistic installations, community and nature parks, and forest visual landscapes, to remind the public of its importance; and,
7. **Water cannot be owned**, source-to-tap delivery is a state expense and responsibility.
8. **Healing** time for environment should be incorporated into cumulative effects.

What can you do? Got to the Water

- **Individual: Go to the water**

- *Satxw: Conscious decision of making a new day through ceremony*
- Learn more about Blue Ecology: water is a healer and unifier
- Celebrate World Water Day: Sunday March 22nd, 2020
- Examine climate change from a water perspective

- **Organization:**

- Be a leader in water management in BC
- Recognize water runs through the veins of the BC Hydro organization
- Incorporate *healing time* of water and land for recent impacts.
- Make water as a core, unifying value
- Include water as a Value Component (VC) in EAs

Future Outlook Attitude:

Path Two:
Nourish Hope



Path One:
Stoke Fear

Attitude

Creativity

Collaboration

Change

Climate

Prevoyance

Interweaving

Switch

People-care

Sacred-springs

Blue-Ecology

Hope

Water