

Water, Peace and Global Security: Canada's Place in a Changing Water World

*An exploration of the UN 2030 Sustainable Development Goals
from the global - local water nexus perspective*

Keynote speaker **Robert Sandford**

with discussant Dr. Jon O'Riordan

Special remarks will be given by B.C. Lieutenant Governor, Honourable Judith Guichon

DATE: January 23, 2018

TIME: 2:30pm-3:45pm

LOCATION: University of Victoria,
David Strong Building (DSB) C116



Co-hosted by:



POLIS Project on Ecological Governance
watersustainabilityproject.org



Pacific Institute
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Rocky Mountain Books

After the talk, join us for the launch of their recently published book, *The Hard Work of Hope*. Location: TBD

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Water, Peace & Global Security: *Canada's Place in a Changing World*

*A presentation by
R.W. Sandford*

*EPCOR Chair, Water & Climate Security
United Nations University
Institute for Water, Environment & Health*





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What is really happening? The Second Copernican Revolution





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What is really happening? A new geological epoch?

The 'Anthropocene'
[or human-centered] geo-
logical epoch may be
characterized by the
**collapse of natural
systems'** built-in
resilience strategies,
meaning human beings
will take on even greater
responsibility for
environmental disruption
and/or wellbeing...





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What is really happening? The Great Acceleration

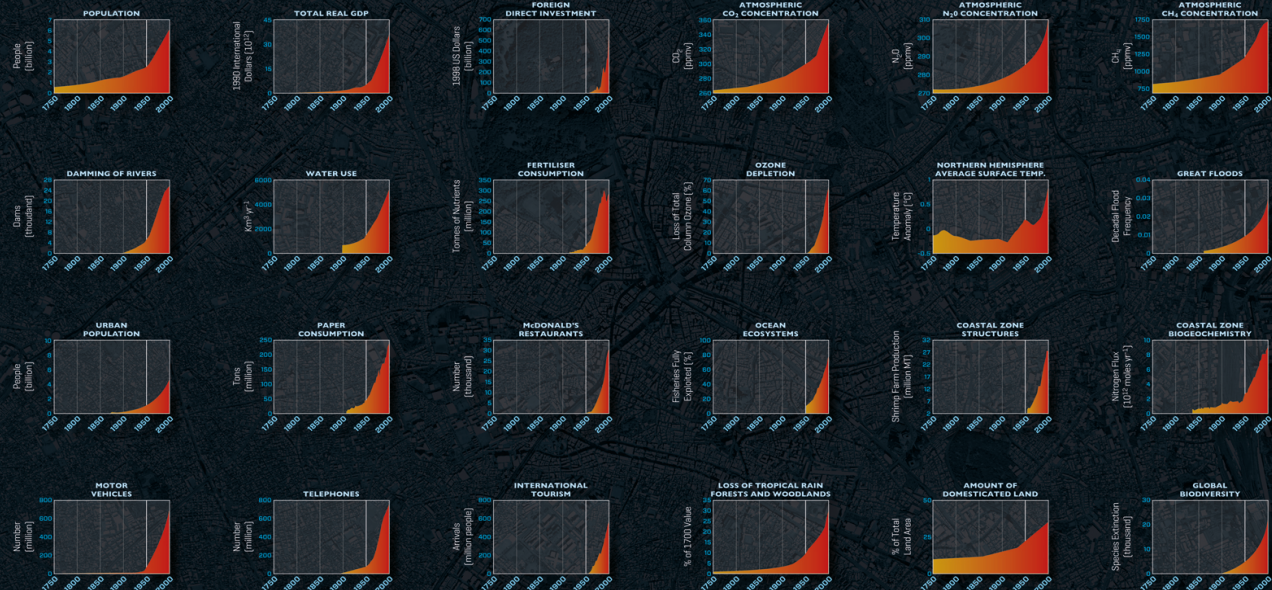
THE ANTHROPOCENE

The Anthropocene defines Earth's most recent geologic time period as being human-influenced, or anthropogenic, based on overwhelming global evidence that atmospheric, geologic, hydrologic, biospheric and other earth system processes are now altered by humans.

The line corresponding to 1950 highlights the **Great Acceleration**, the post-World War II worldwide industrialization, techno-scientific development, nuclear arms race, population explosion and rapid economic growth.

These graphs were compiled in a publication of the International Geosphere-Biosphere Programme (IGBP).

GLOBALIA



SOURCE: igbp.net | Steffen et al., 2005, Global Change and the Earth System, Springer, pp. 132-133
DESIGN: Globalia.org

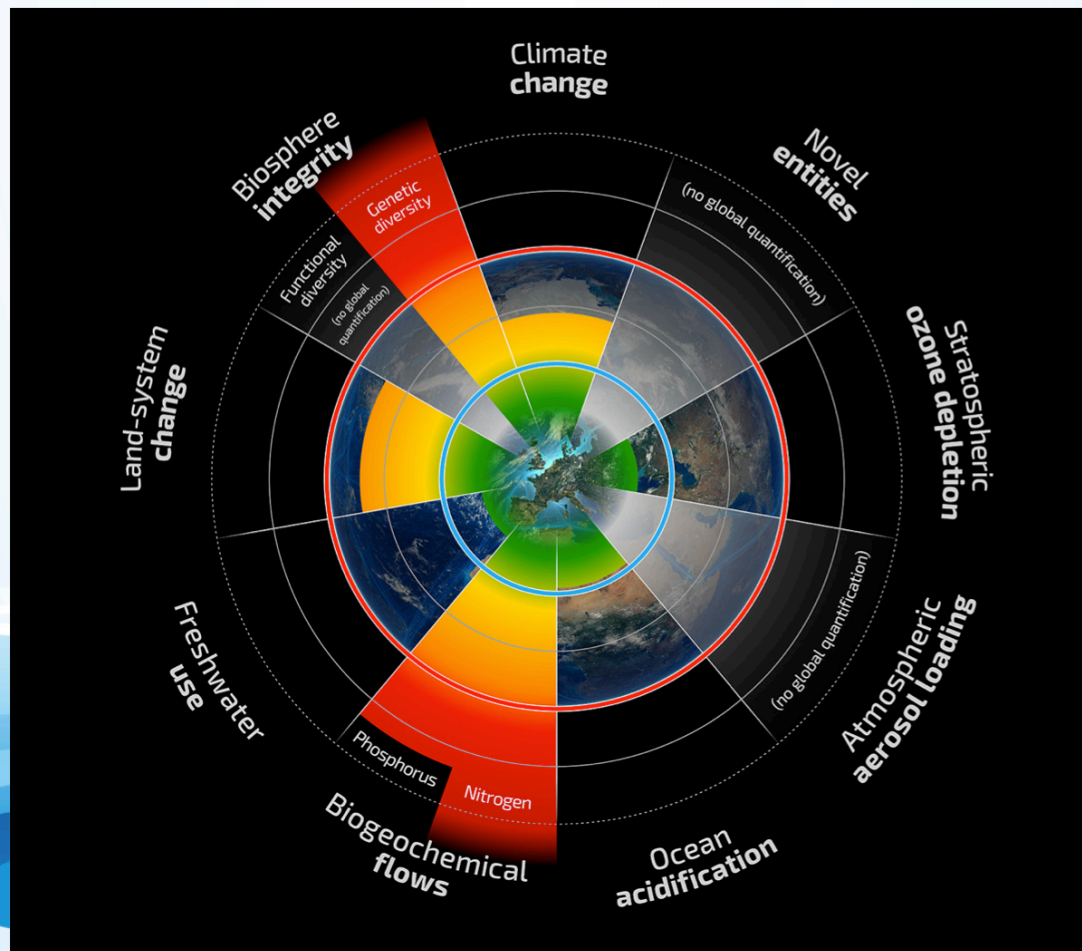


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What is really happening? Earth System Boundaries



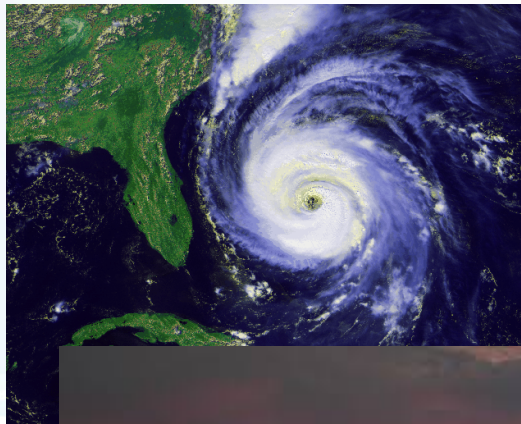


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*More water, moving more quickly through
the global water cycle in a higher energy
atmosphere.*





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So what does it mean for Canada?





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How will hydro-meteorological change affect global peace and security?



Water Security in a New World

David Devlaeminck
Zafar Adeel
Robert Sandford *Editors*

The Human Face of Water Security

 Springer

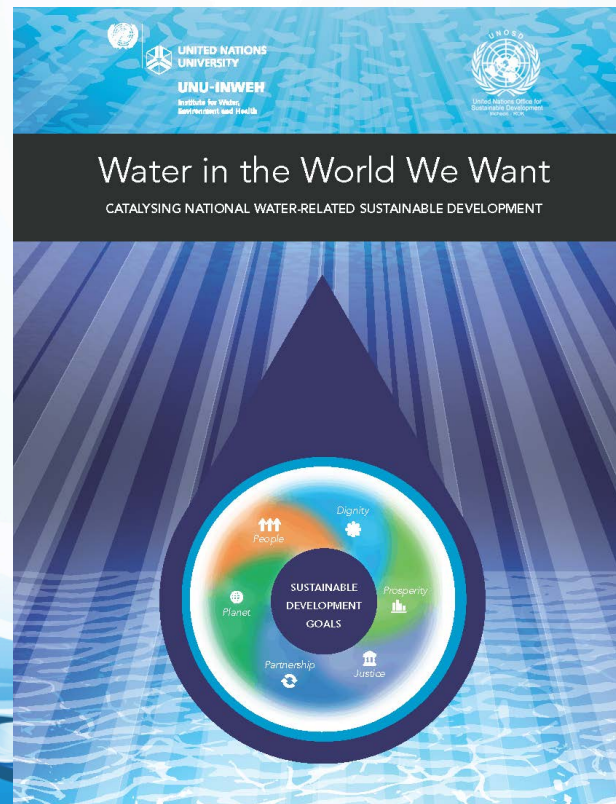


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Water & sustainable development





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Water Security & Climate Stability: We can adapt.

ROBERT WILLIAM SANDFORD

STORM WARNING

WATER *and* CLIMATE SECURITY
in a CHANGING WORLD





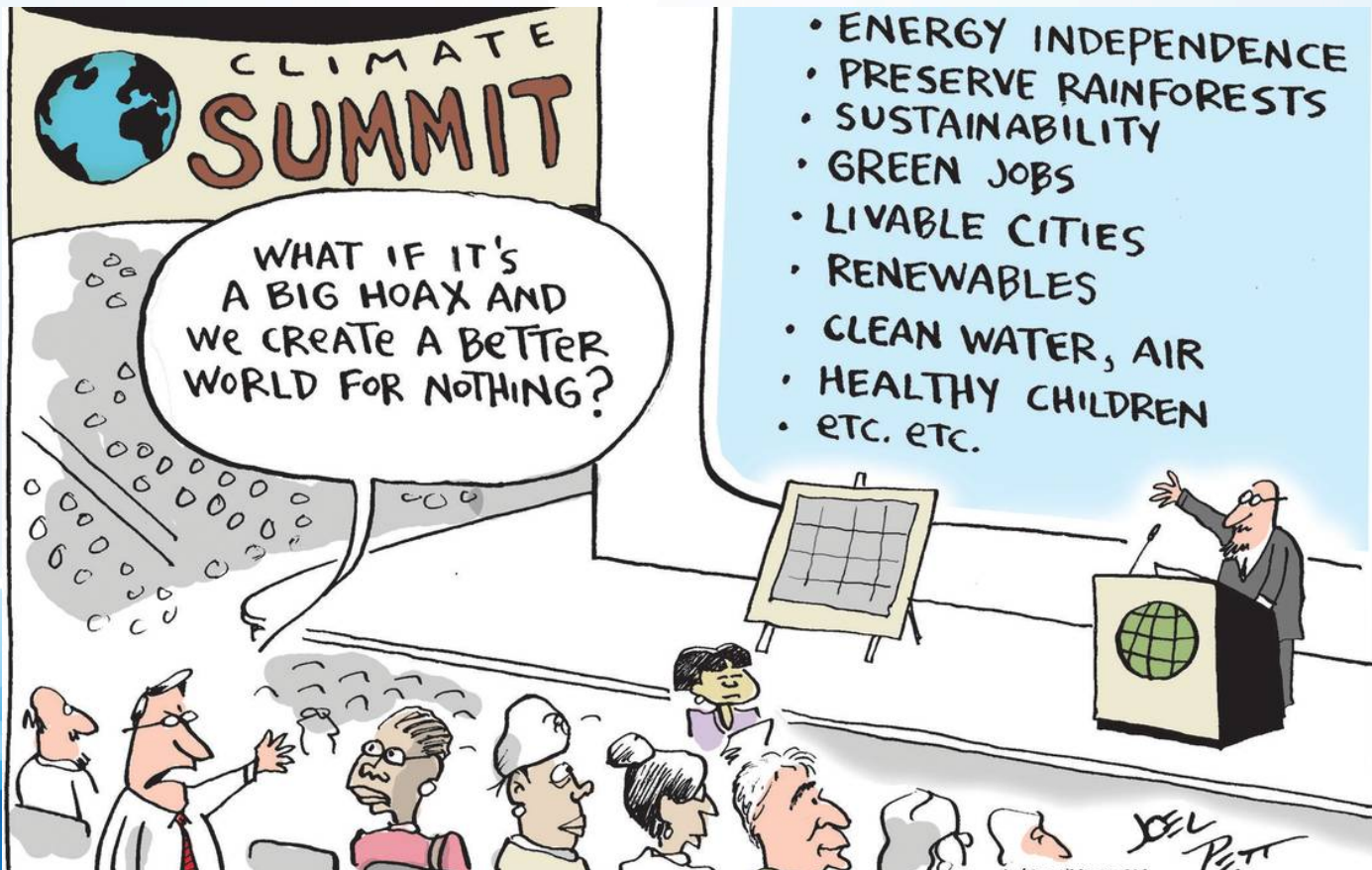
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Water Security & Climate Stability:

We can create a better world





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**UNITED NATIONS
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SUMMIT 2015**
25 - 27 SEPTEMBER



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Transforming Our World: Creating a safe operating space for humanity





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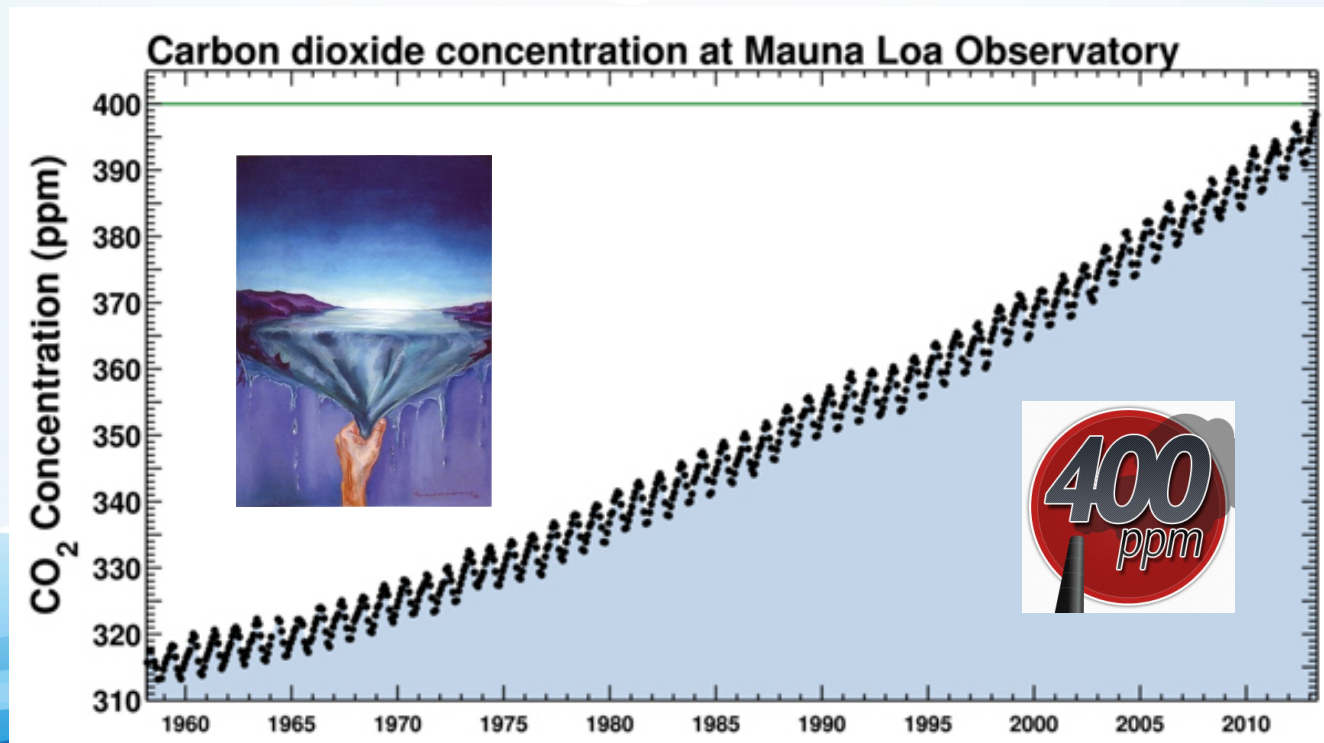


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Follow the Water: *Expect changing availability, temperature & quality of water & an accelerated hydrologic cycle*

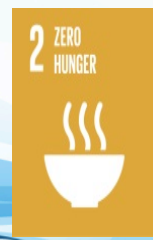




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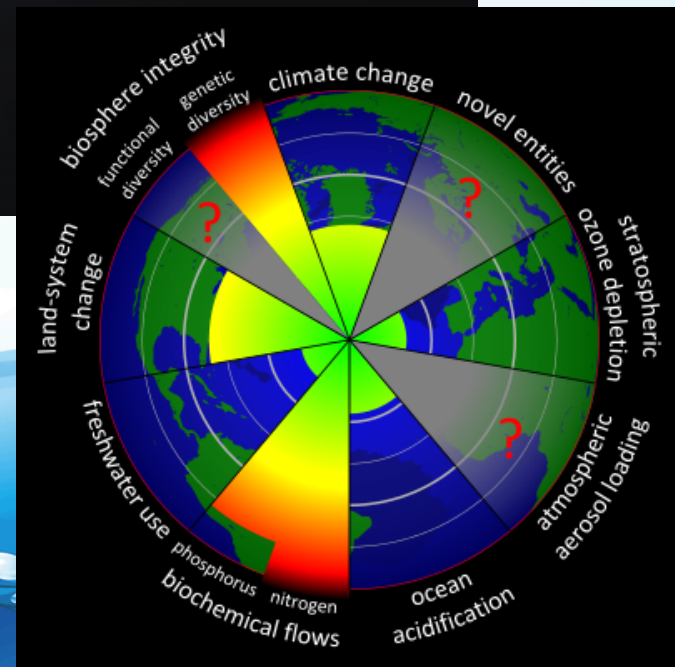
It is time for a new discipline.



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THE LANCET

#PlanetaryHealth





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UN Decade of Action Water for Sustainable Development 2018 - 2028





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“Business as usual is not enough”

Water for Sustainable Development 2018 – 2028

This is an opportunity to raise awareness, define a roadmap and advance the water agenda.

*Antonio Guterres
UN Secretary-General*



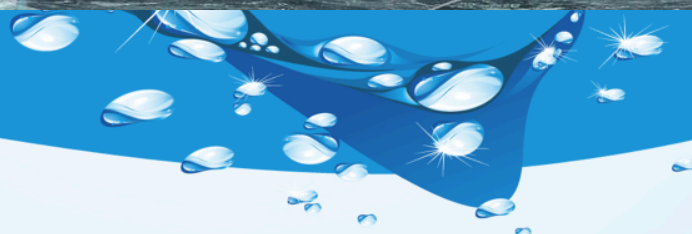


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The Black Canoe *Bill Reid*





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Interaction between Climate and SD Goals

Jon O'Riordan
Polis and ACT Research Associate
Tuesday January 23, 2018

Linkage between Climate and SD Goals

- UN vision– carbon neutral planet by mid century.
 - 50% reduction in carbon; 50% increase in sequestration by 2050
- Doughnut economics- Kate Raworth
 - ‘Safe’ and ‘just’ Earth by linking climate vision (safe) with SD Goals (just)
 - Income inequality; health; food and water security must be tackled as well as climate
- Anthropocene will ratchet up pressure on these linkages

What has to Change

- Carbon reduction must be fully integrated with climate adaptation.
 - Low Carbon Resilience
 - Combine reduction with adaptation where possible
- Climate and SD policies must become central in future policy making
 - Trade; transportation; health; housing and immigration
 - Site C decision should be linked to Low Carbon pathways to 2060 (PICS) project
- Decision criteria should address higher risk profiles and increased user charges

What has to Change

- Focus on water security
 - Continuous change in hydro climatic conditions
 - Scale of impact ranges from regional to local
- New approach to water based planning
 - Mackenzie Basin Agreement
 - Water Use Plans
 - Nicola pilot on watershed management plans
 - Application to OCP renewals
- Policy shifts
 - Collaborative consent; environmental flows; science and monitoring; pricing water use
- Opportunities for restorative ecosystem based planning in the Columbia River Treaty negotiations

What has to Change

- Education and communications
- Public increasingly divided into tribal groups
 - Deniers; activists; sitting on shelf
 - Need to break self- reinforcing messages
- Experiential learning
 - Stewards for the Future program
 - Carbon tracking through internet of things
- Top down policies and bottom up adaptation
 - Switch to disruptive technologies made easy
 - Changes in consumer patterns– more recycling

What has to Change

- Governance decision making
 - Current process is conflict riven with high transaction costs
 - Too many players have power over decisions
 - Prolonged delays in final decisions
- Need to align values associated with low carbon resilience
 - Policy alignment on renewable electricity grids
 - Shared decision making with indigenous groups
 - Great Bear Rain Forest example
 - Strategic decisions first then tactical decisions



Q & A

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Book Signing & Reception

UNIVERSITY CLUB – 3800 Finnerty Road
4:00 PM

