

Recognizing the
Value of Water

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Okanagan Basin Water Board – 7.9.12

What's driving the value of water?

Where are the opportunities?

What holds us back?

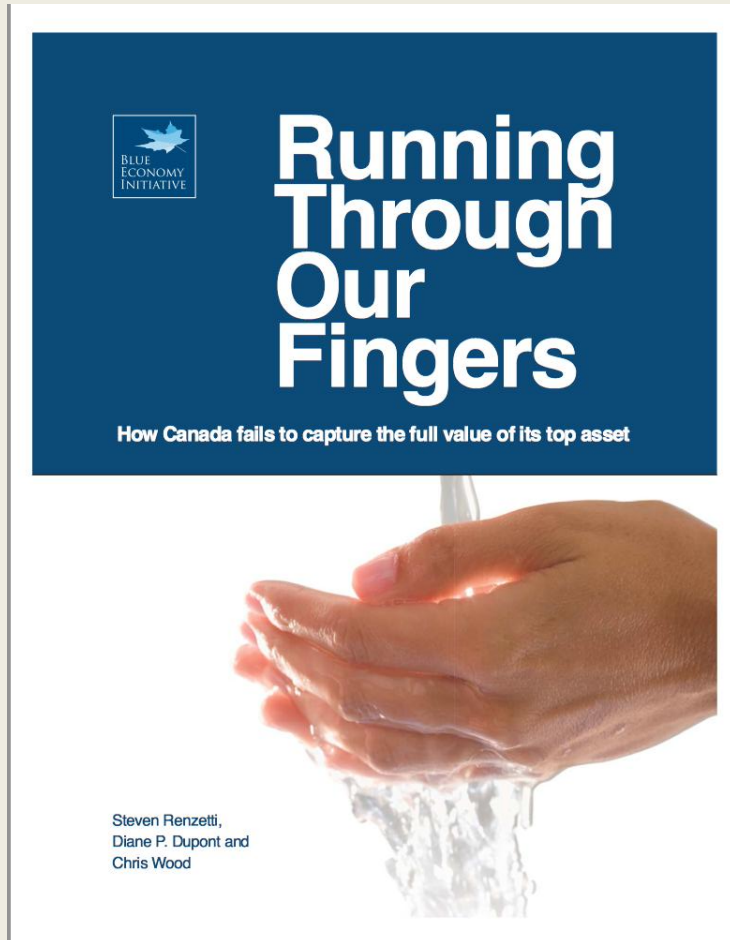




Seeking a 'blue' economy

The first report in 25 years to ask what water really contributes to Canada's wealth...

(Spoiler: we can't tell.
The data are missing.)



Sometimes, water really is ..



...priceless!

2_x

Global food production
must *double* by 2040

8

Countries produce more than half the food traded globally.

Yes, we're one.

\$500 Billion:

Annual world trade in water-related
goods and services in 2010

\$1 Trillion a year:

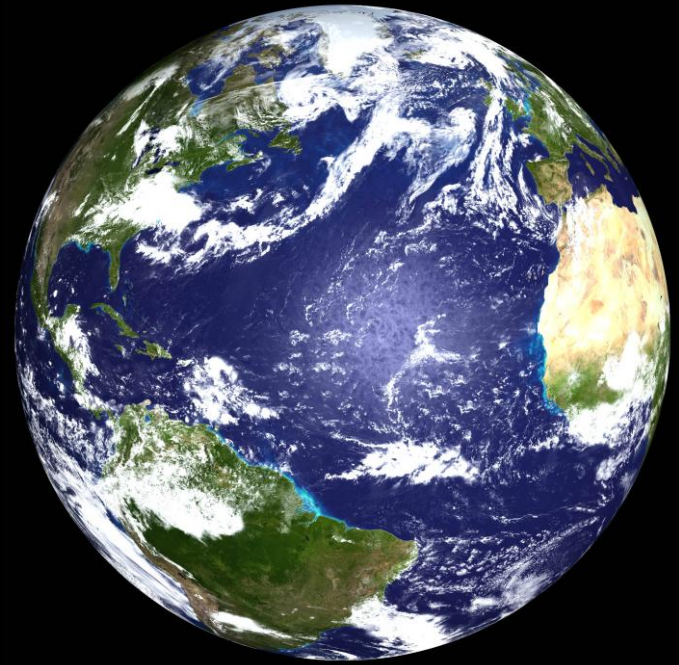
World trade in water-related goods
and services by *2020*

3.5
cubic kilometers*

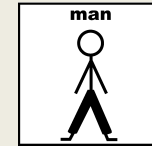
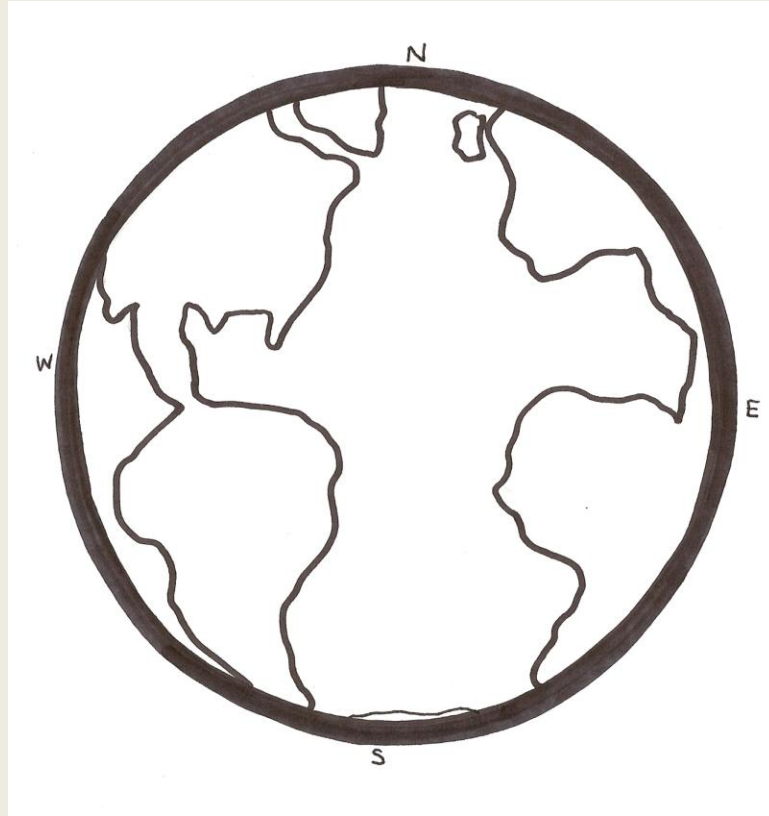
Amount of water southern Canada is
losing every year to climate change

* Roughly enough to supply all Canadian households for a year.

All we have

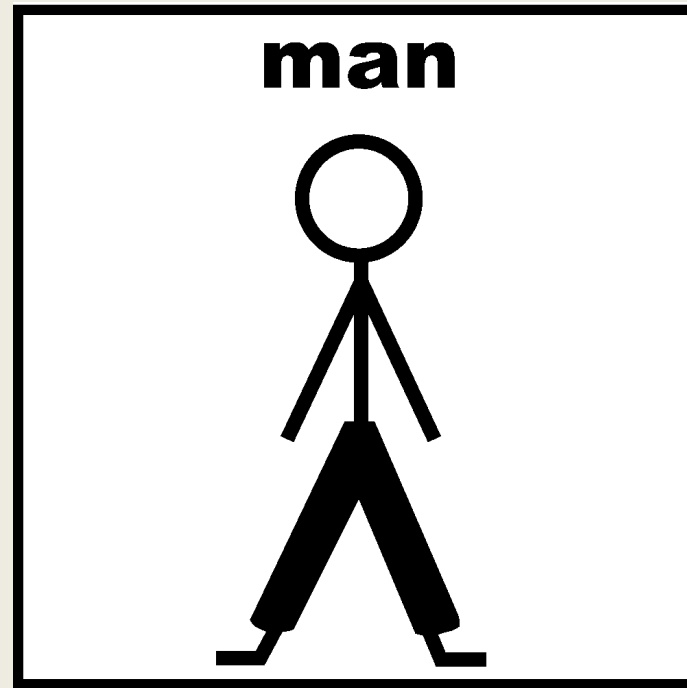
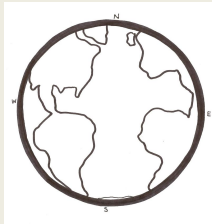


Since forever... to ~1980



Eco-supply >>>> Human demand

Now... and forever?



Eco supply <<<< Human demand

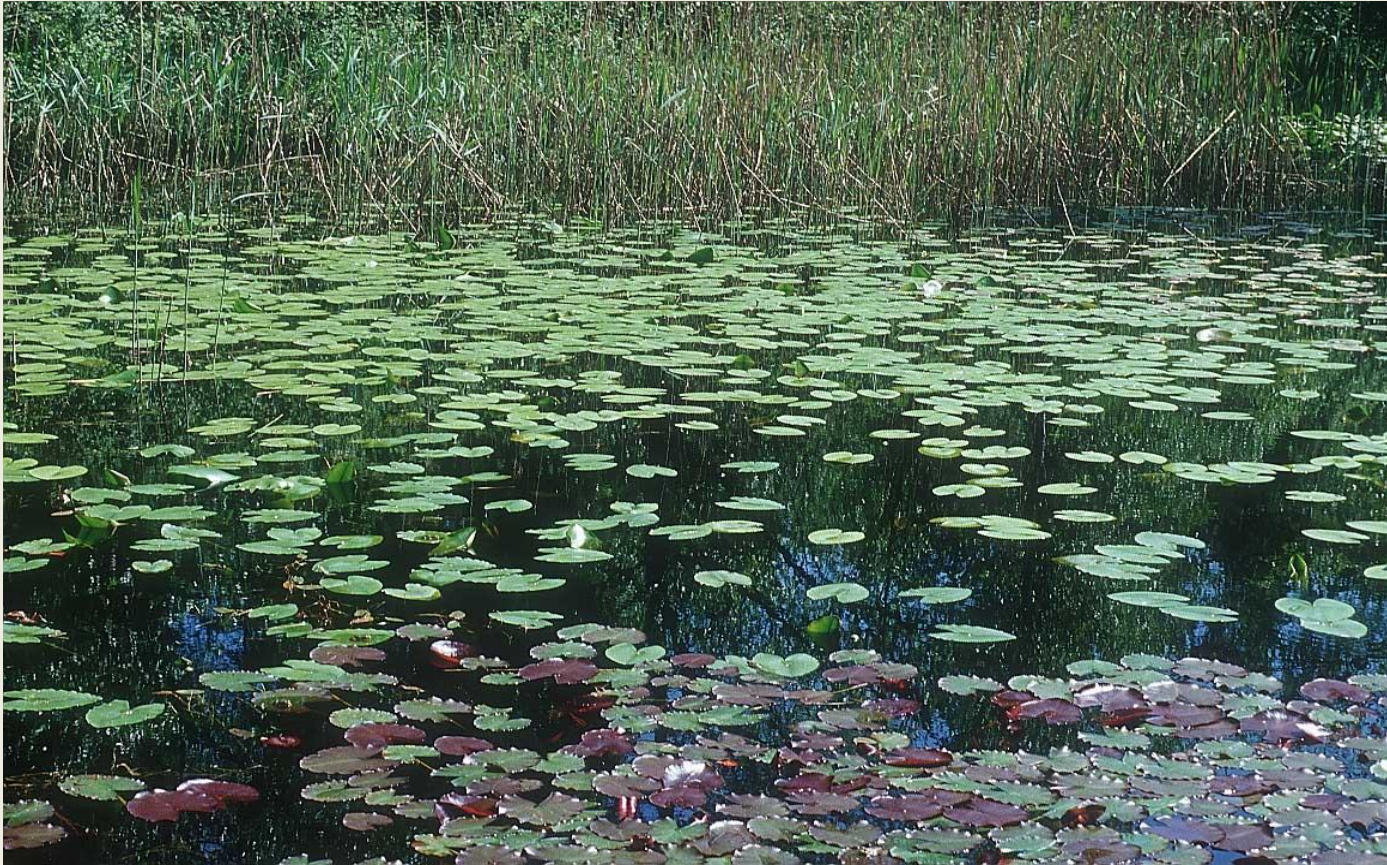


Lower Colorado River in freshet

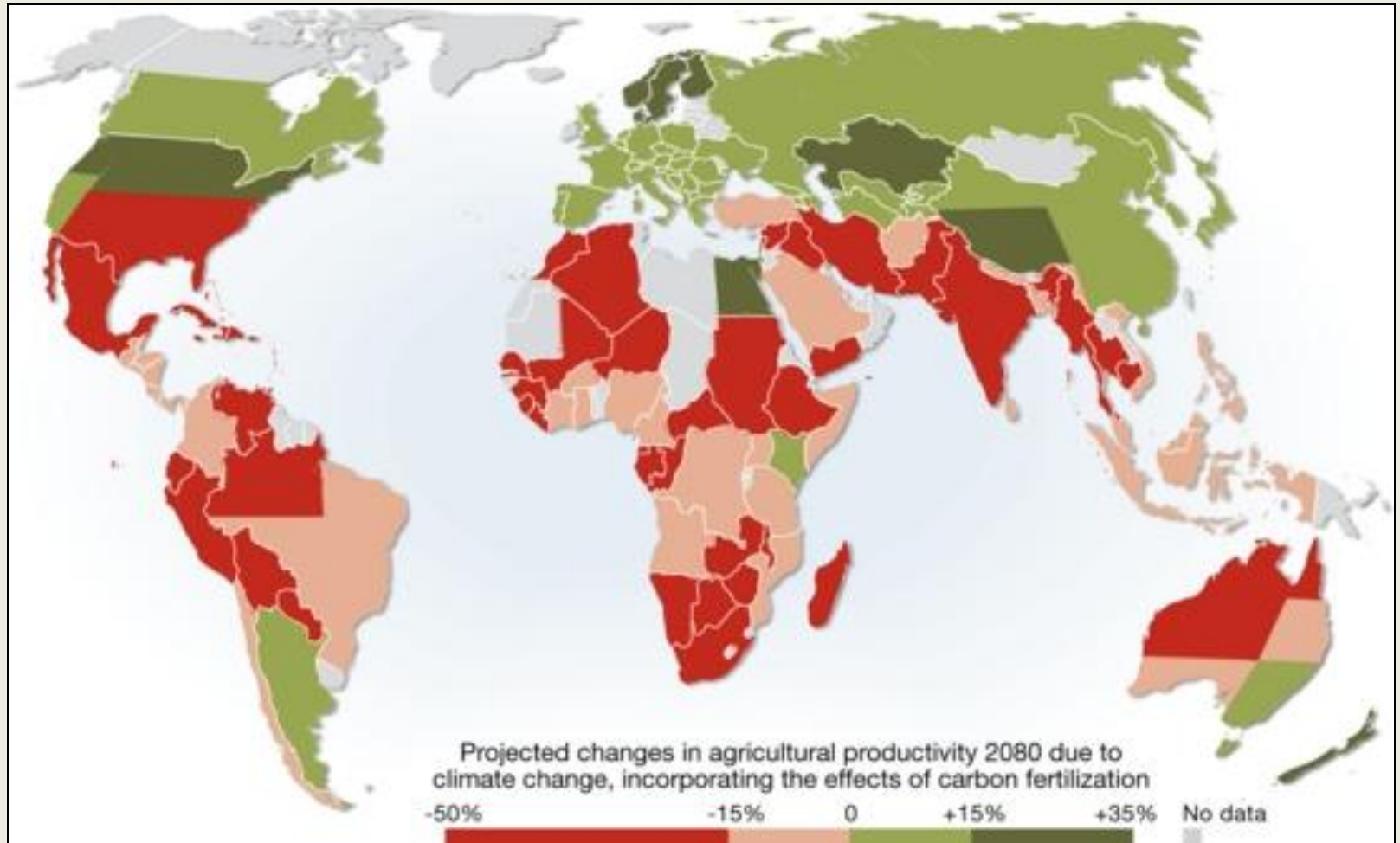
National Security Asset:



Natural Security Asset:



Breadbaskets: Redlining



Eight Food Superpowers

produce >50% of all the world's
major food commodities

- Argentina
- Australia
- Brazil
- Canada
- China
- India
- Russia
- USA

Eight Food Superpowers

But two need all the food they grow for their huge populations.

- Argentina
- Australia
- Brazil
- Canada
- ~~China~~
- ~~India~~
- Russia
- USA

Eight Food Superpowers

Two others lack the water to expand food production.

• ~~Argentina~~

• ~~China~~

• ~~Australia~~

• ~~India~~

• Brazil

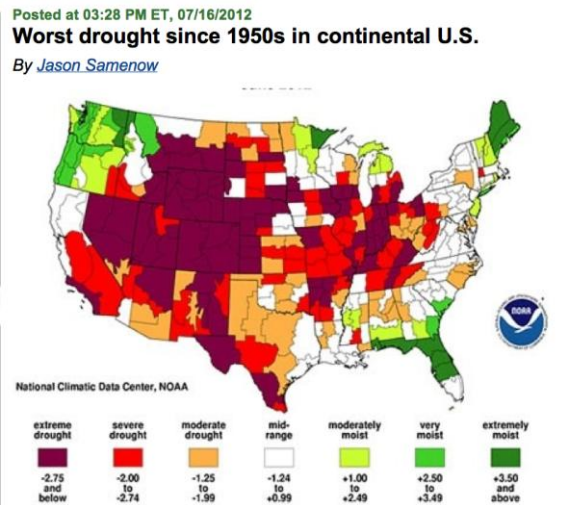
• Russia

• Canada

• USA

2012:

60+ per cent of
US counties
in drought



Three ~~Eight~~/ Food Superpowers

~~• Argentina~~

~~• China~~

~~• Australia~~

~~• India~~

• Brazil

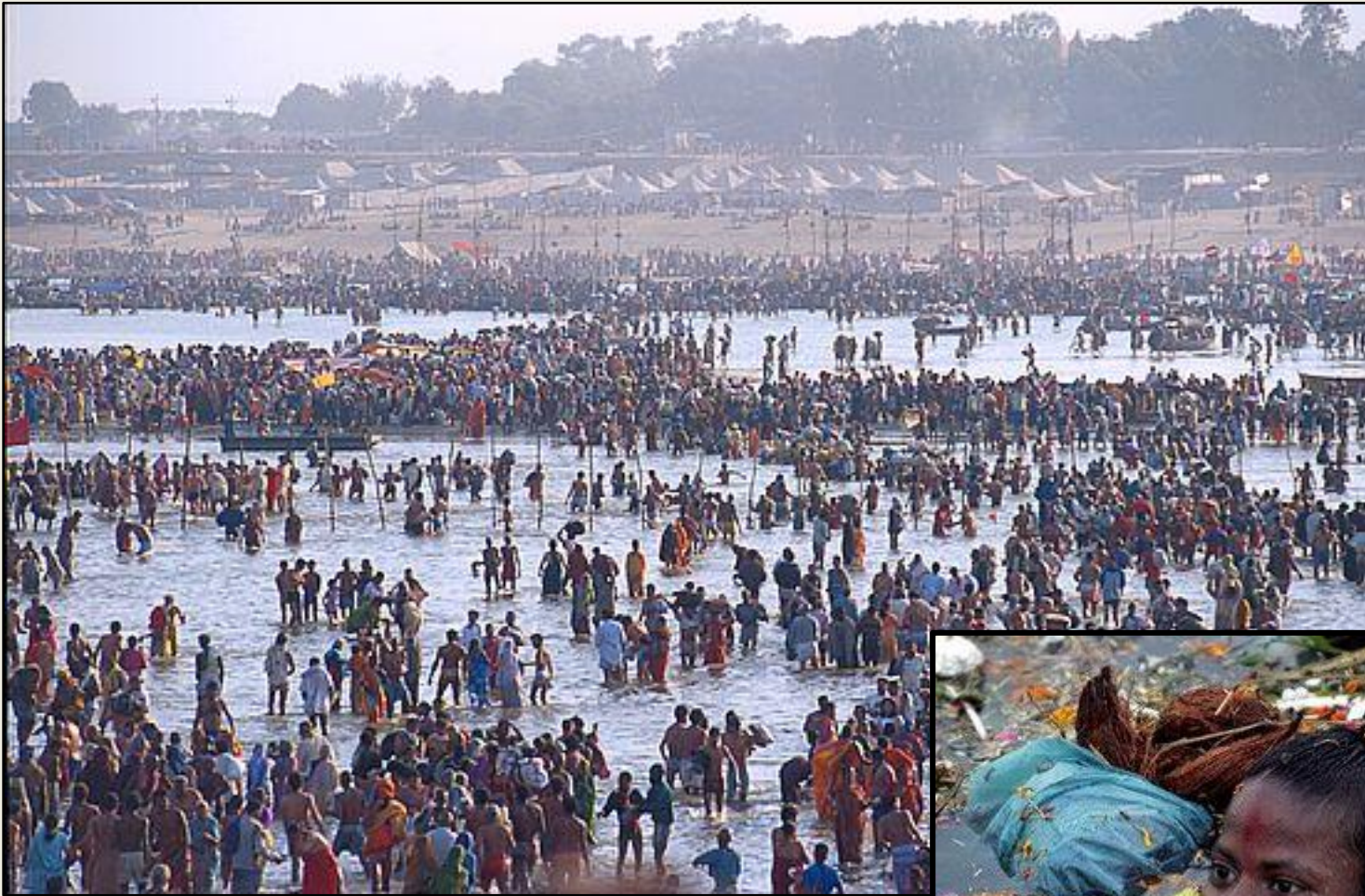
• Russia

• Canada

~~• USA~~

Water = wealth (and power) in the 21st century

- Food for a hungry world
- Demand raises all food prices
- People move from water stressed to water rich places
- Industry follows the (clean, reliable) water



The Okanagan:

A 'Napa of the North'
climate

Attractive to people
with high human and
financial capital

An entrepreneurial
culture



Crisis Contains Opportunity



The opposite is
also true...

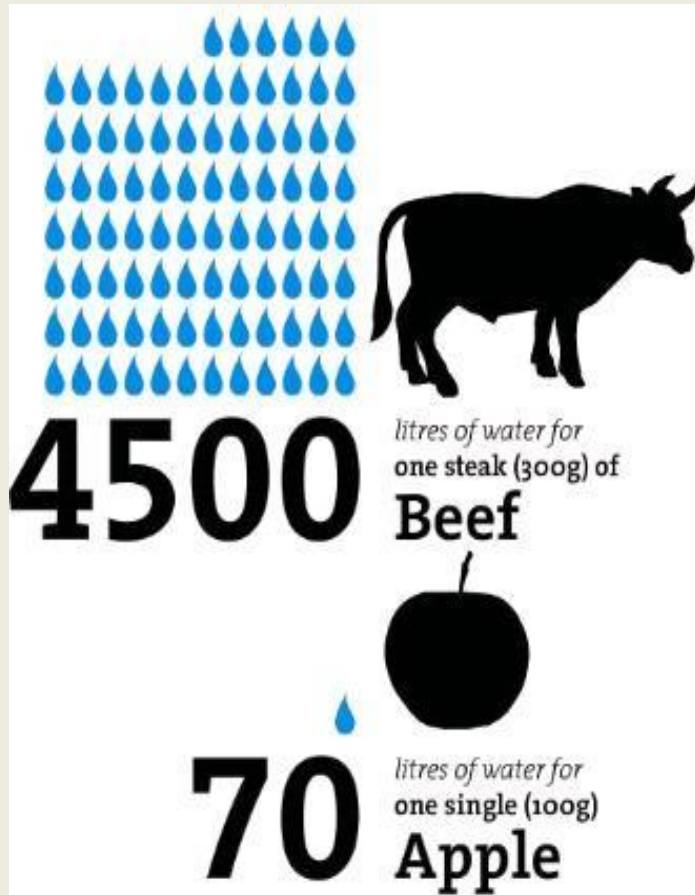
We're not swimming in it either

-8.5%: how much Southern Canada's available water (yield) fell between 1971 and 2004.

> 200: number of pharmaceuticals and other industrial chemicals found in Fraser R. water.

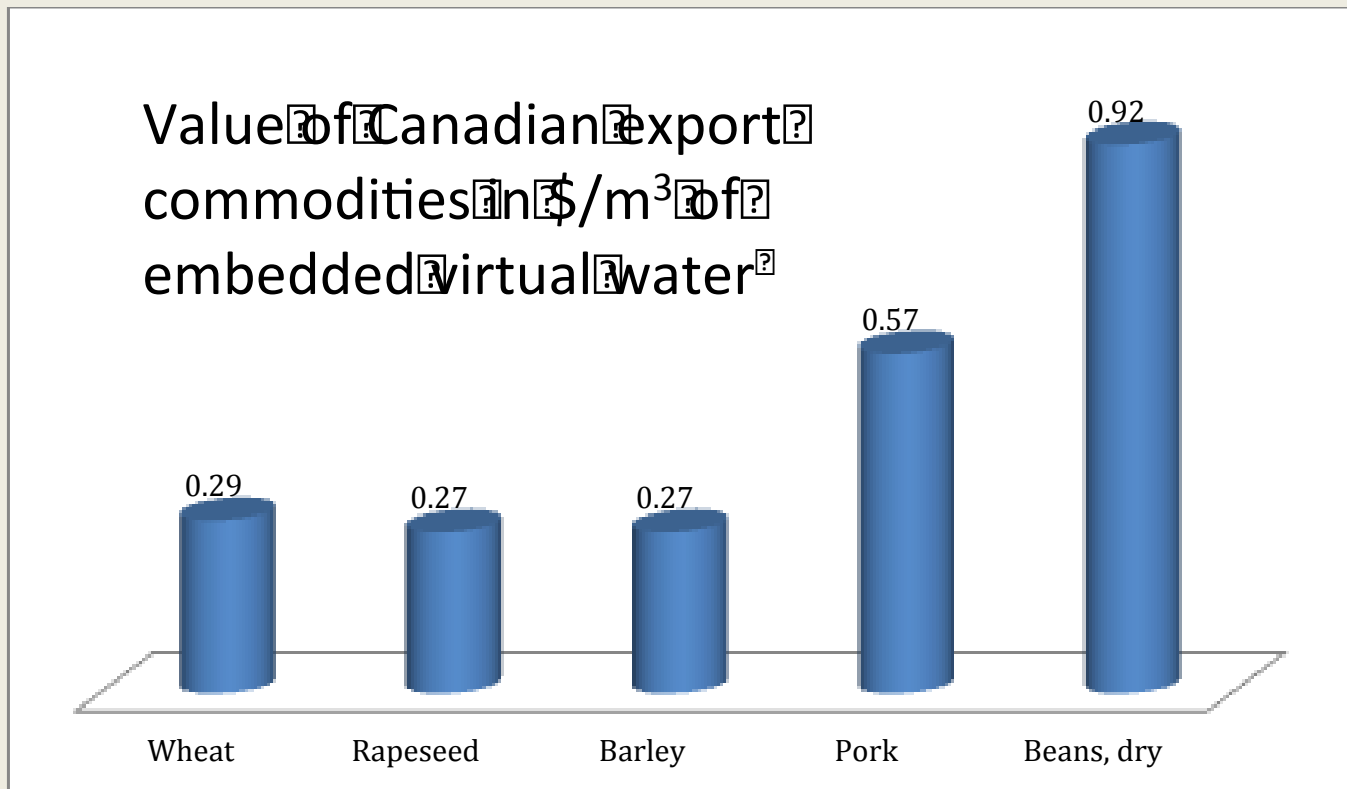


Time to think about 'ROWI'

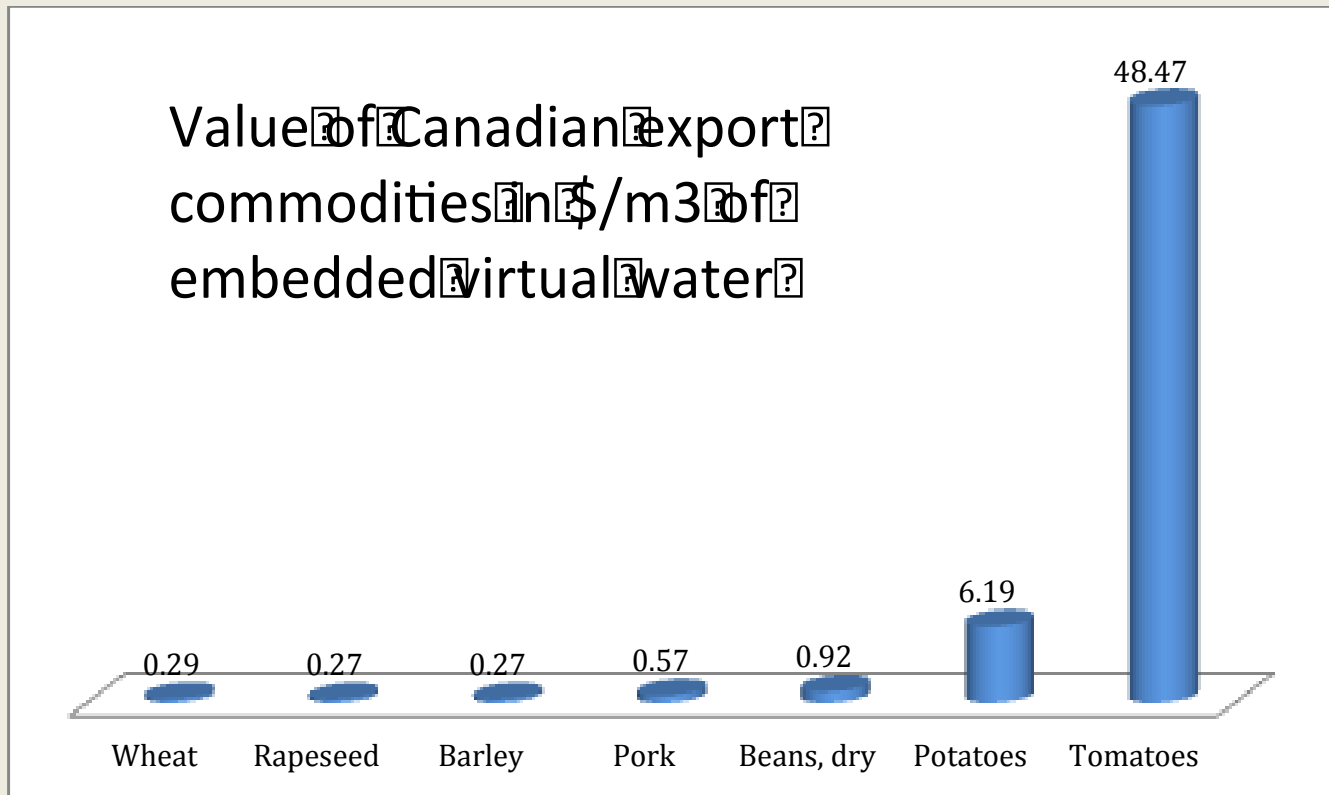


What's the Okanagan's
return on water invested?

Getting the biggest bang per drop



Striking differences in $\$/\text{m}^3$



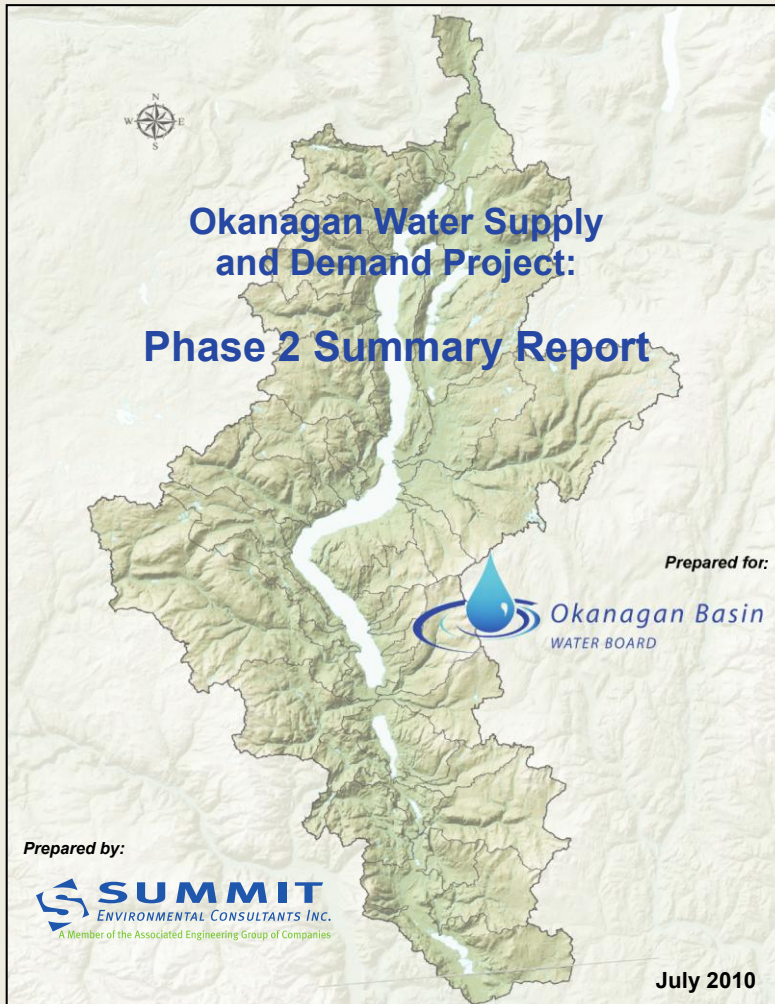
A hectare of barley earned a Manitoba farmer \$310 in 2009.

Ploughing that hectare cost the Manitoba public \$143.

How to
reduce the
value of
water

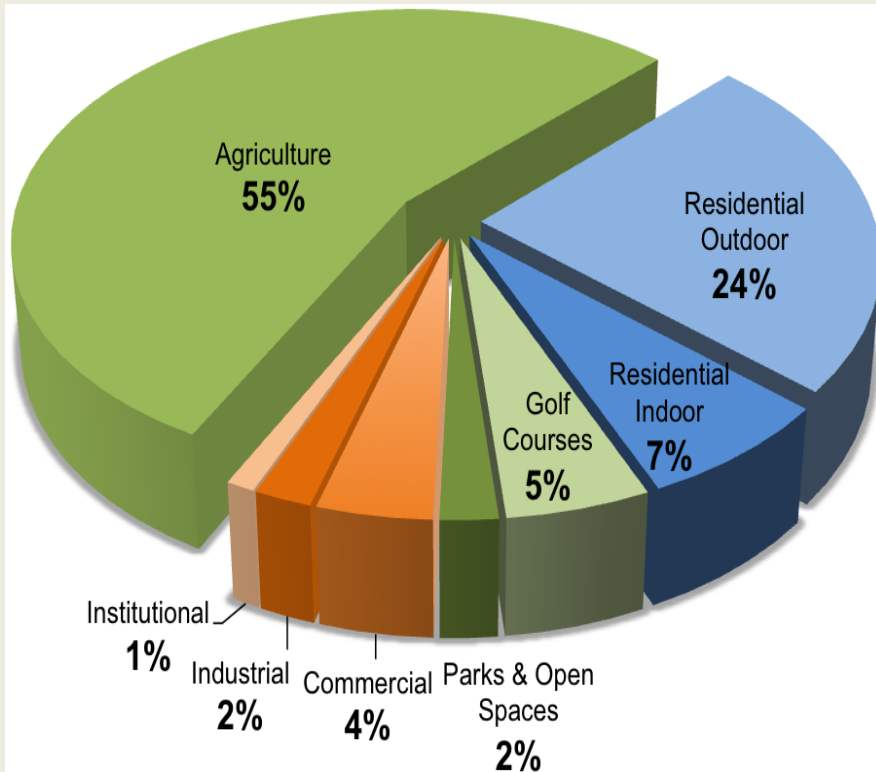


A great start... but



- Unsustainable practices
- In-migration beyond forecasts
- Climate change
- Known unknowns

Unsustainable Practices



Water used on Okanagan lawns could support the (indoor) needs of *three times* its population.

Changing Climate

Heavy rains destabilize slopes.

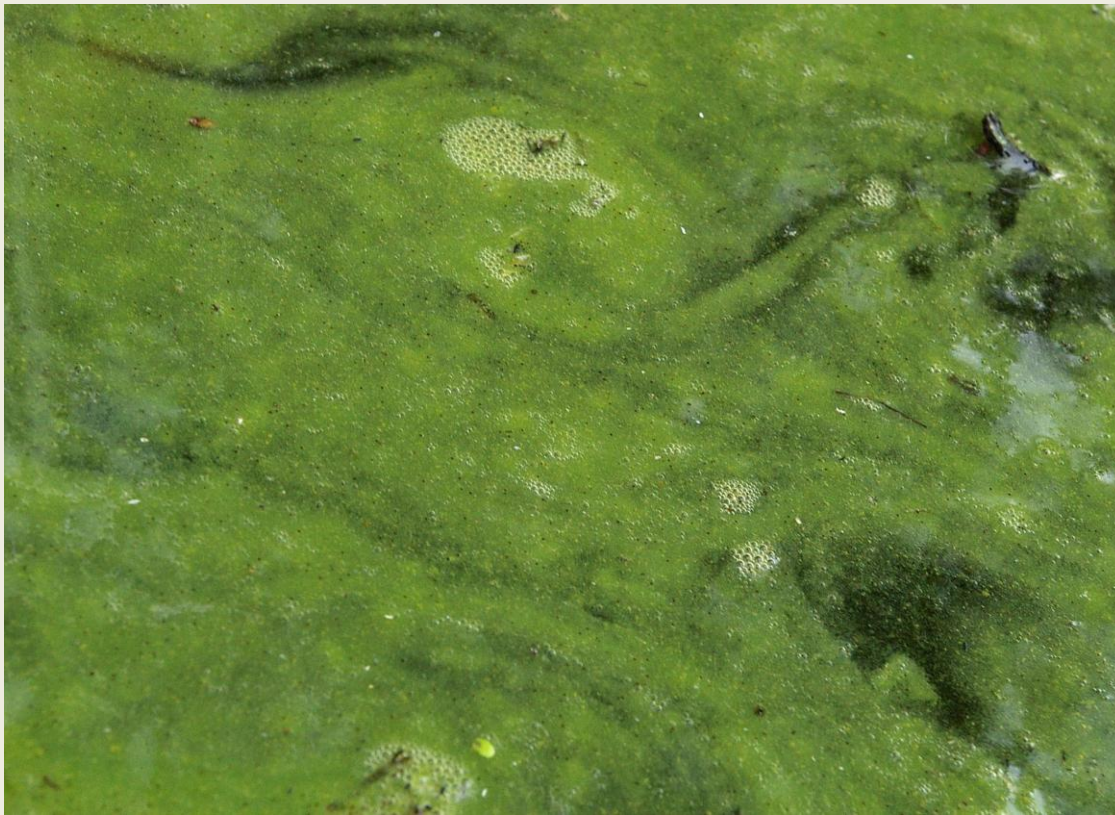
Hotter summers empty reservoirs.



Fires expose watersheds to erosion.



Green: it's not always good!



One in ten Canadian lakes surveyed in 2012 contained a potent liver toxin produced by blue-green algae.

Known Unknowns

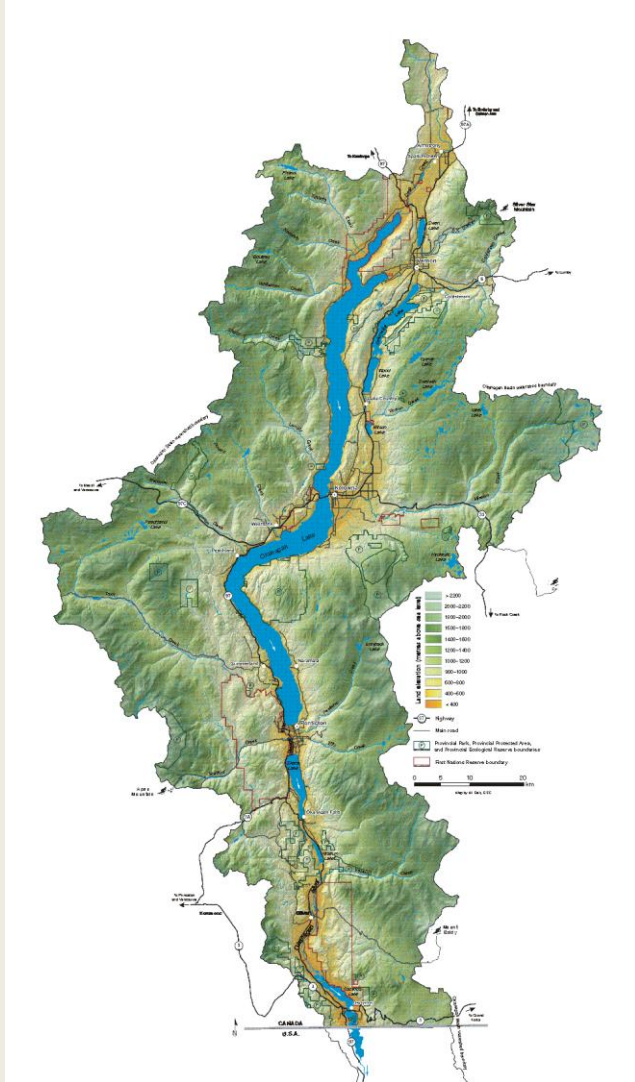
- ET is clawing back more water.. but how much?
- Where is your water *really* being used?
- How are ground and surface water connected?
- How much water do your streams need to thrive?



Okanagan Opportunities

- High-value agriculture
- Water-based recreation & tourism
- Water *quality*-dependent industry
- ‘Refuge’ for high-net-worth migration

Information reveals value...



- Meter everything
- Pool your data
- Get behind new ideas

It's a new world

- Water scarcity drives wealth

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- Spare water is *not* one of them
- But ingenuity and enterprise *are*
- Value your water, value your landscapes, and
- Get the most value back out of both.

Everything you need
to win the 21st century



Good luck!