



Healthy Cities 2.0

Towards One Planet Cities

IUHPE Plenary 2

Rotorua, New Zealand

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Dr. Trevor Hancock

**Retired Professor and Senior Scholar
School of Public Health and Social Policy
University of Victoria**



Outline

- 1. Health Promotion 2.0: An eco-social approach**
- 2. The global context: The Anthropocene and planetary health**
- 3. Cities and countries of 'The North': Ecological and health inequity**
- 4. One Planet Cities: Thinking globally, acting locally**



1. Health Promotion 2.0: An eco-social approach to health



Health promotion has been ecologically blind

- **The Ottawa Charter (1986)**
 - **Recognised “stable ecosystems and sustainable resources” as prerequisites for health**
 - **Proposed a socio-ecological approach to health**
- **“An ecosystem which is stable now and sustainable in the long term” is one of the 11 parameters of a Healthy City**

Hancock and Duhl, 1986

But in practice, HP has focused on the SOCIAL determinants of health



The ecological determinants of health

But we depend on ecosystems for the very stuff of life:

- **Air**
- **Water**
- **Food**
- **Fuel and materials**
- **Protection from UV radiation**
- **Waste recycling and detoxification**
- **A relatively stable and livable climate.**



2. The global context: The Anthropocene and planetary health



Three aspects to the Anthropocene

- **A geological phenomenon, a new geological epoch**
- **An ecological phenomenon – massive and rapid global ecological change**
- **A human phenomenon - we are the anthropos in the Anthropocene**



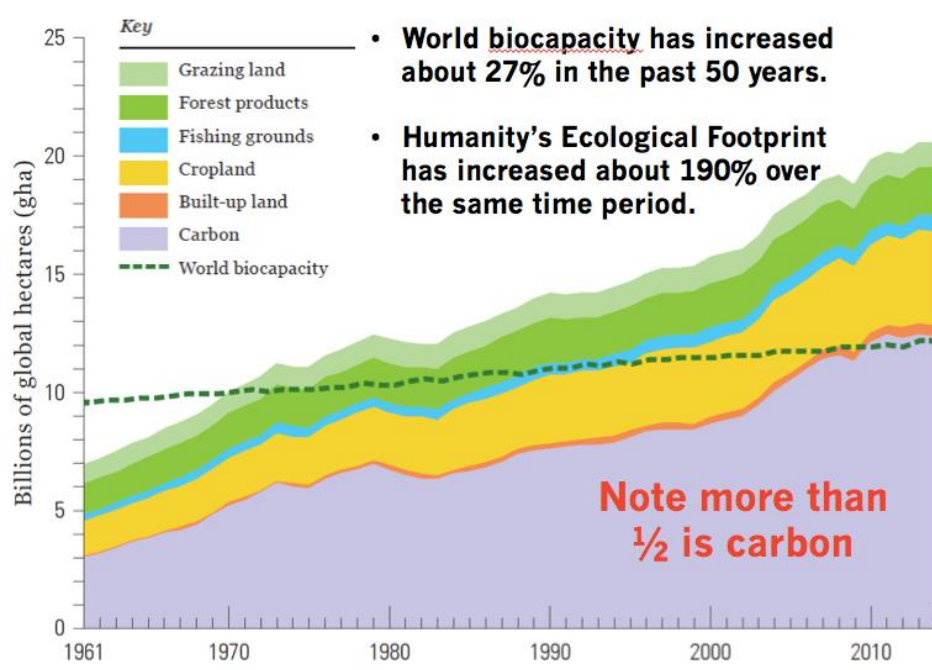
Key ecological aspects of the Anthropocene

- **Climate change**
- **Ocean acidification**
- **Ozone layer depletion**
- **Resource depletion**
- **Pollution and ecotoxicity**
- **Species extinctions**

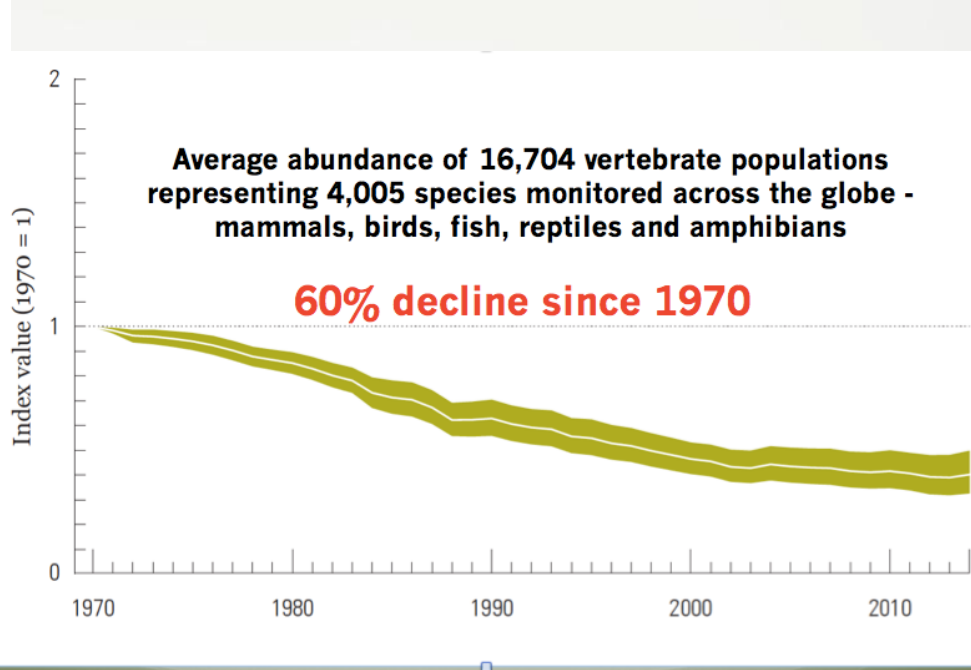
ALL AT THE SAME TIME



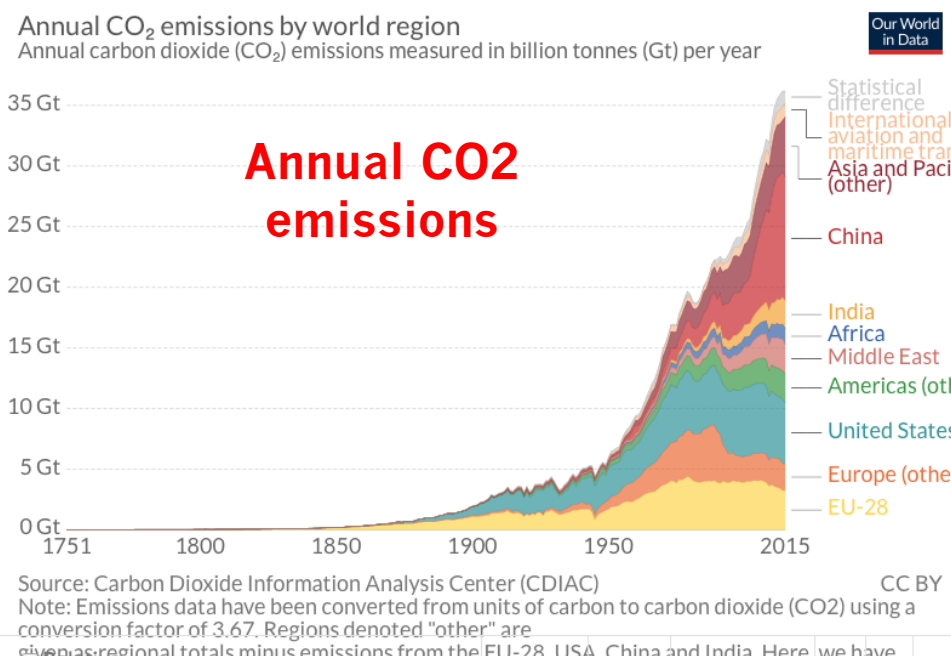
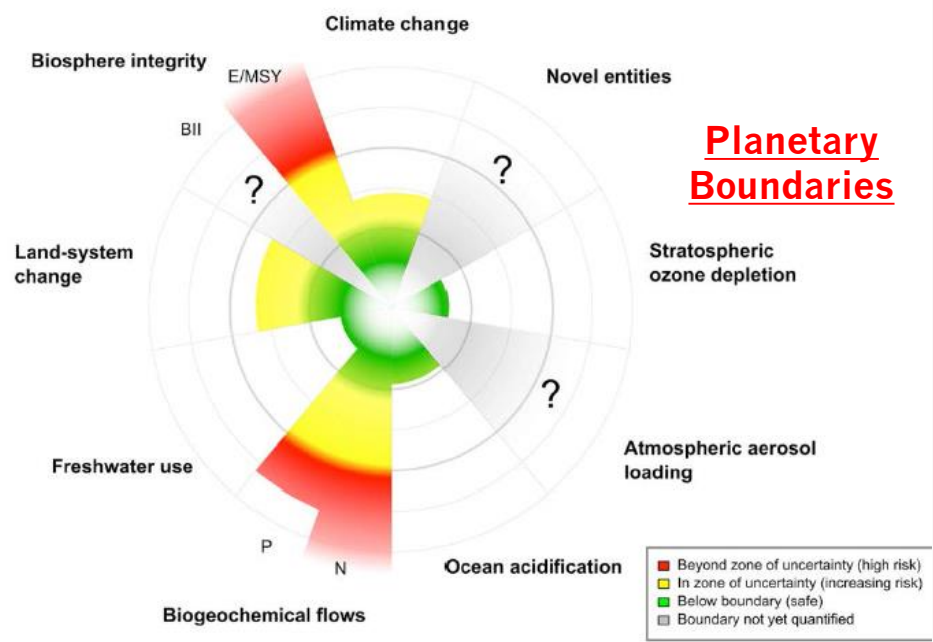
It is the both the **scale** and
the **rapidity** of change
that matters



Global Ecological Footprint, 1961 - 2014



Living Planet Index, 1970 - 2014



Our World in Data

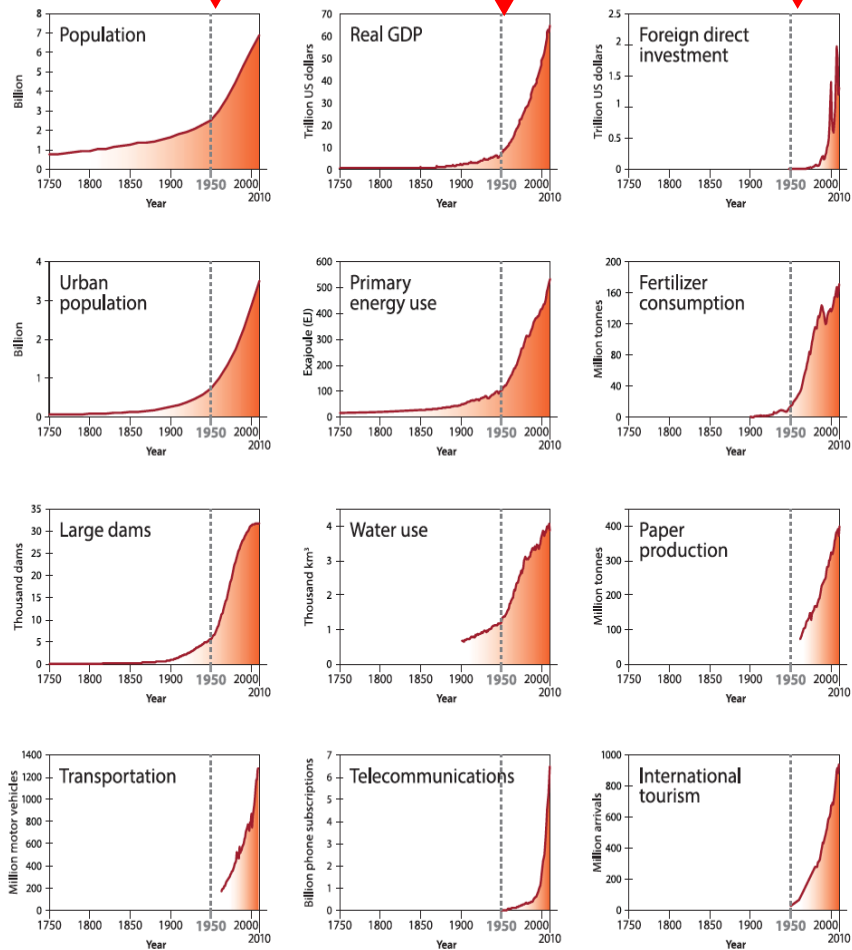
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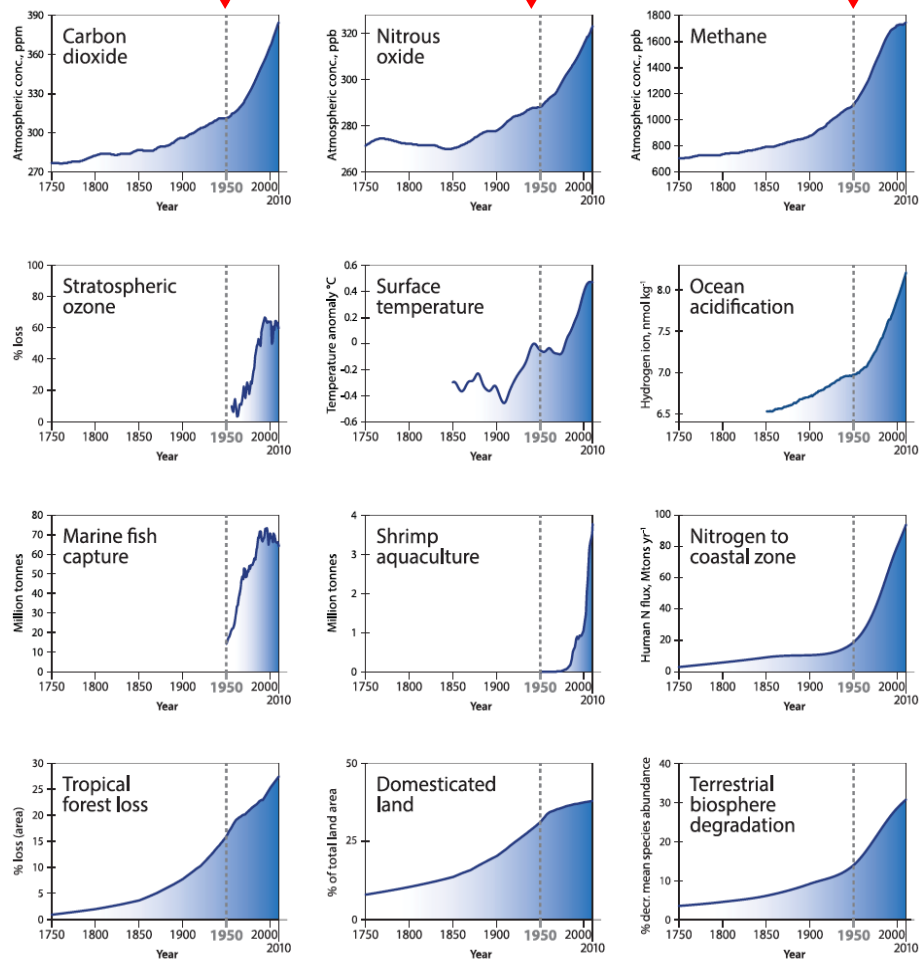
'The Great Acceleration'

Socio-economic trends

1950



Earth system trends





My life in the Anthropocene

I was born in 1948. From then to approx 2010/2012

Socio-economic trends

Population	2.73 x
Real GDP (2005 US\$)	11.1 x
Urban population	4.74 x
Primary energy use	5.14 x
Fertilizer consumption	14.4 x
Large dams	5.85 x
Water use	3.28 x
Paper production	5.38 x
Transportation (vehicle #s)	7.23
Telecommunications (billion landlines and subscriptions)	> 9,000 x
International tourism arrivals	37 x

Earth System trends

CO ₂	+ 26%
Methane	+59.5%
Global surface temperature anomaly (°C) v 1961-1990	+ 0.471 v - 0.036
Ozone loss (2012) • Peak loss (1994)	50.8% 66.9%
Ocean H ion	+18%
Marine fish capture	+ 4.6 x
Nitrogen flux to coast	4.26 x
Tropical forest loss (compared to 1% in 1700)	27.66% v 15.65%
Agricultural land % of total (0.08% in 1750)	0.38% v 0.31%
Terrestrial biosphere degradation (2.8% in 1700)	28.6% (2000) v 14% (1950)



The Millennium Ecosystem Assessment, 2005

- **“At the heart of this assessment is a stark warning. Human activity is putting such strain on the natural functions of Earth that **the ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted.**”**



The ecological determinants of health

We depend on ecosystems for the very stuff of life:

- **Air**
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- **Protection from UV radiation**
- **Waste recycling and detoxification and**
- **A relatively stable and livable climate.**



CANADIAN PUBLIC HEALTH ASSOCIATION
DISCUSSION PAPER

**Global Change
and Public Health:**

*Addressing the
Ecological Determinants
of Health*



May 2015

**Global Change and Public Health:
Addressing the Ecological
Determinants of Health**

THE REPORT IN BRIEF

**WORKING GROUP ON THE ECOLOGICAL
DETERMINANTS OF HEALTH**

APRIL 2015

Spady and Colin L. Soskolne

Available at

<http://www.cpha.ca/uploads/policy/edh-brief.pdf>

http://www.cpha.ca/uploads/policy/edh-discussion_e.pdf

http://www.cpha.ca/uploads/policy/edh-discussion_f.pdf



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The Rockefeller Foundation–*Lancet* Commission on planetary health

Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–*Lancet* Commission on planetary health

Sarah Whitmee, Andy Haines, Chris Beyrer, Frederick Boltz, Anthony G Capon, Bráulio Ferreira de Souza Dias, Alex Ezeh, Howard Frumkin, Peng Gong, Peter Head, Richard Horton, Georgina M Mace, Robert Marten, Samuel S Myers, Sania Nishtar, Steven A Osofsky, Subhrendu K Pattanayak, Montira J Pongsiri, Cristina Romanelli, Agnes Soucat, Jeanette Vega, Derek Yach

**It is time for a
new discipline.**



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#PlanetaryHealth



Mortgaging the health of future generations

“we have been mortgaging the health of future generations to realise economic and development gains in the present. By unsustainably exploiting nature’s resources, human civilisation has flourished but now risks substantial health effects from the degradation of nature’s life support systems in the future.”

**Rockefeller Foundation–Lancet
Commission on Planetary Health**



**The Anthropocene is
arguably the greatest
threat to global health
in the 21st century**



3. Cities and countries of ‘The North’: Ecological and health inequity



Historical contribution to climate change

Over the period **from 1850 to 2012,**

- **the USA was responsible for 22% of total CO₂ emissions and the EU for 18%;**
 - **China, Russia, India and Brazil were responsible for 13, 6, 5 and 4 percent respectively, with the rest of the world accountable for 37%.**
- **It is estimated that by 2100 the USA and the EU will have contributed almost half (45%) of temperature increase resulting from overall Kyoto GHG emissions.**



Inequitable carbon emissions

- **“the poorest half of the global population – around 3.5 billion people – are responsible for only around 10% of total global emissions attributed to individual consumption”**
- **“50% of these emissions . . . can be attributed to the richest 10% of people around the world”.**
 - This latter group “have average carbon footprints 11 times as high as the poorest half of the population, and 60 times as high as the poorest 10%.
 - The average footprint of the richest 1% of people globally could be 175 times that of the poorest 10%”



Inequity in the Ecological Footprint

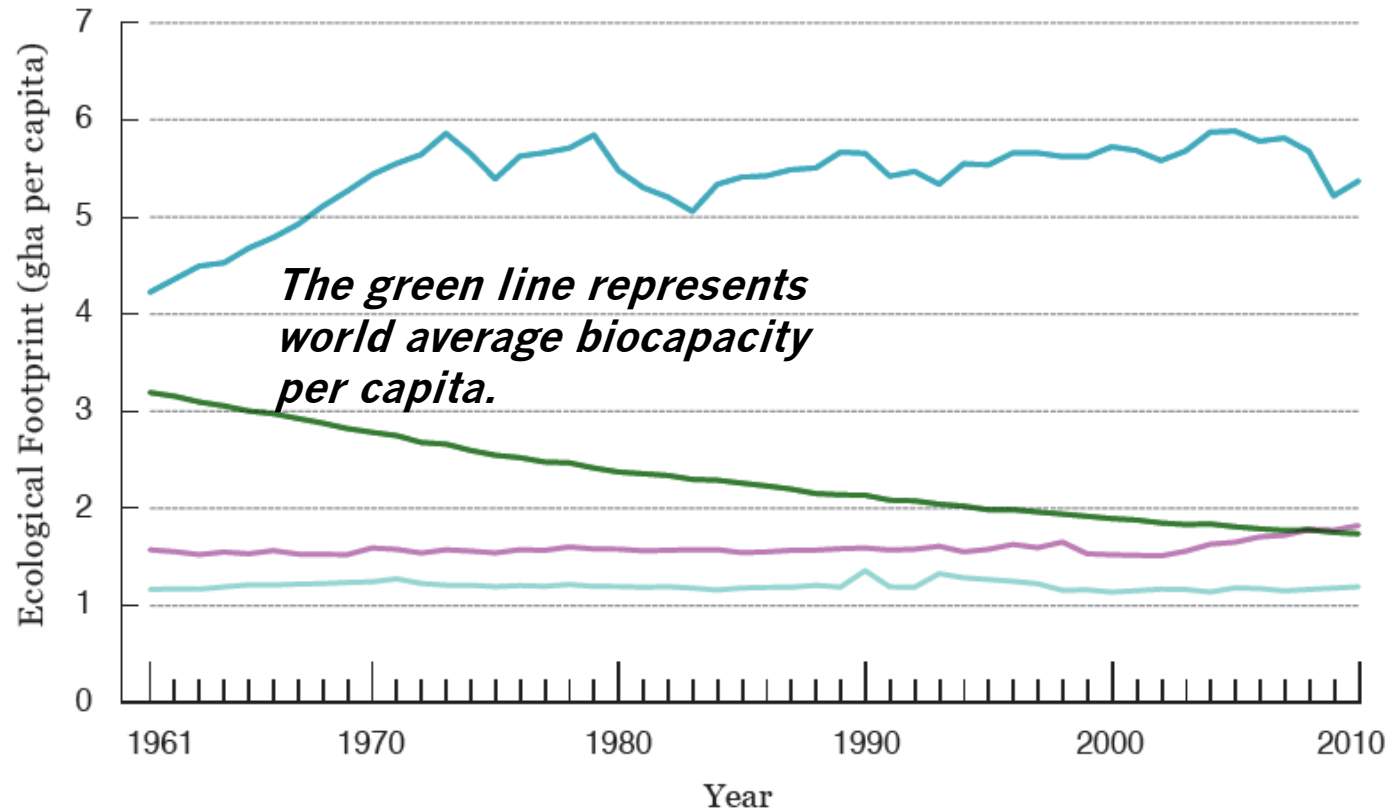


Figure 6: Ecological Footprint per capita (gha) in high-, middle- and low-income countries (World Bank classification and data) between 1961 and 2010
The green line represents world average biocapacity per capita. (Global Footprint Network, 2014).

Key

- High income
- Middle income
- Low income
- World biocapacity

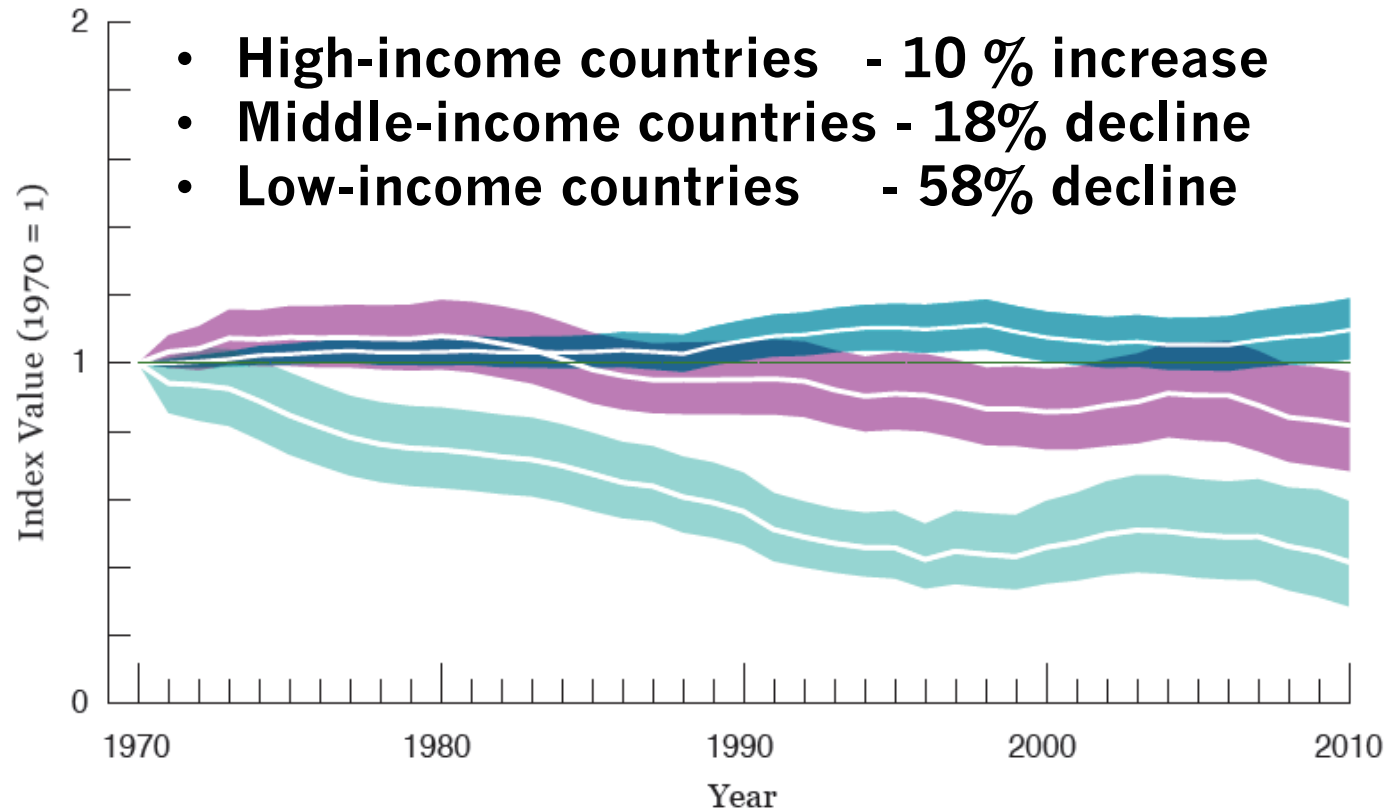


Inequity in the Living Planet Index

Figure 7: LPI and country income groups (World Bank classification), 1970-2010. (ZSL, WWF, 2014).

Key

- High income
- Middle income
- Low income





**In Canada we act as if we
had this . .**





**. . . but this is
what we have**





**So this means an 80%
reduction in our
ecological footprint**



**. . . while at the same
time meeting basic
needs and ensuring
high levels of human
and social development
and good health for all**



4. One Planet Cities: Thinking globally, acting locally



**How do we
live equitably,
in harmony
and in good
health on this
one small
planet we call
home?**





People, planet and participation: The Kuching Statement

- **People**: People's physical, mental and social wellbeing is the core business of cities. . . . successful cities put the focus on quality of life.
- **Planet**: People cannot thrive without the Earth's support systems or the biodiversity of natural ecosystems.
- **Participation**: In order to put people and the planet at the heart of governance, healthy, just and sustainable cities engage fully with their citizens and community organizations.



Conversations for a One Planet Region

Vision

•The Greater Victoria Region achieves social and ecological sustainability, with a high quality of life and a long life in good health for all its citizens, while reducing its ecological footprint to be equivalent to one planet's worth of bio-capacity.

Mission

•The Mission of *The Conversations* is to establish and maintain community-wide conversations on One Planet living and a One Planet Region.

<https://creativelyunited.org/one-planet-region/>

Learn - Discuss - Imagine - Design - Create





10 principles of One Planet Living



Health and happiness



Local and sustainable food



Equity and local economy



Travel and transport



Culture and community



Materials and products



Land and nature



Zero waste




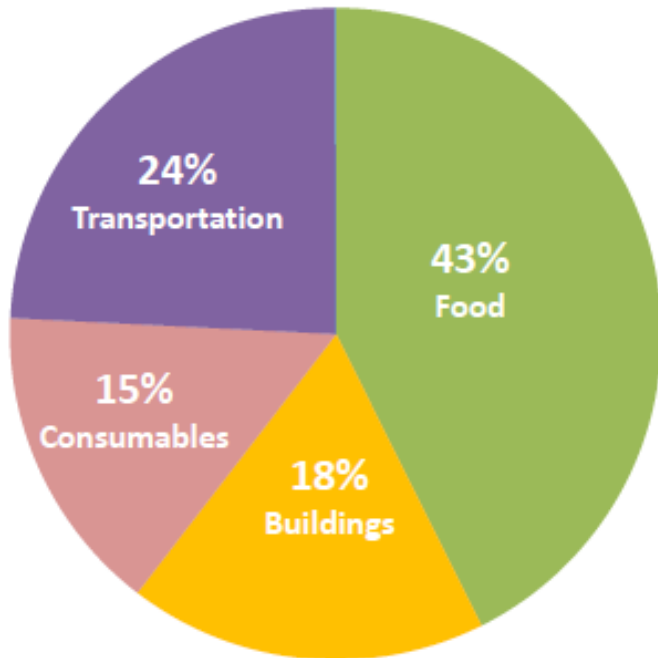
Sustainable water




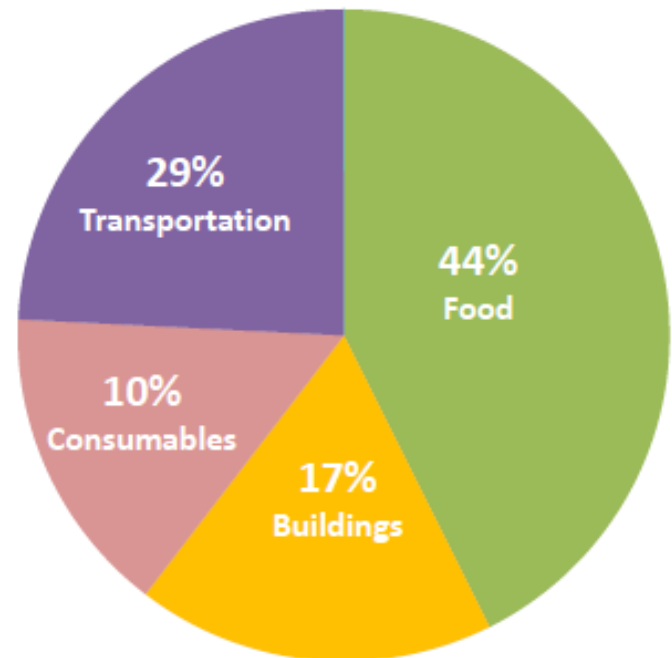
Zero carbon energy

Comparison of Outputs – Saanich & Victoria

Victoria Ecological Footprint 



Saanich Ecological Footprint 

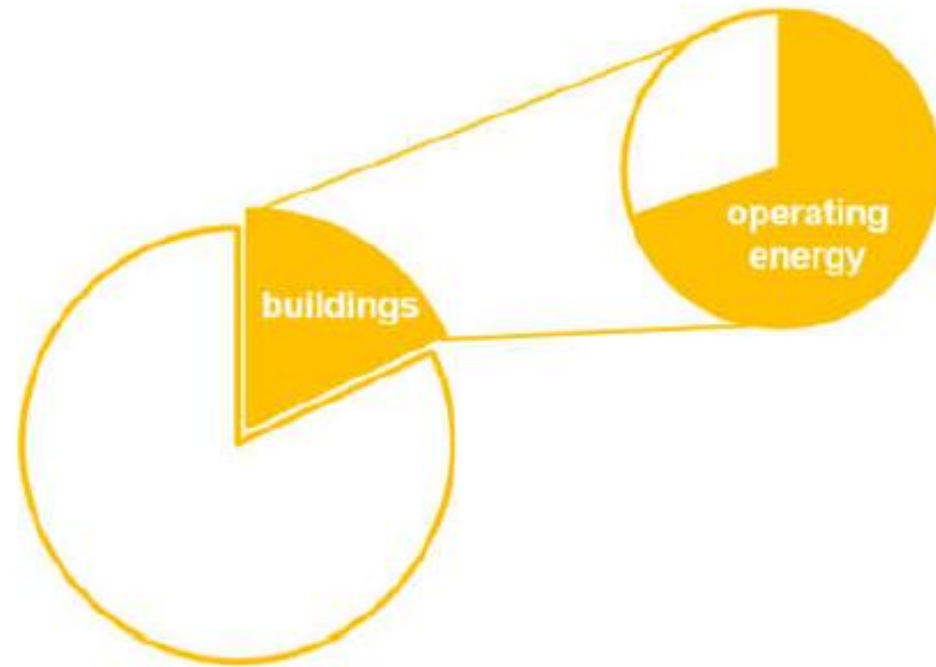
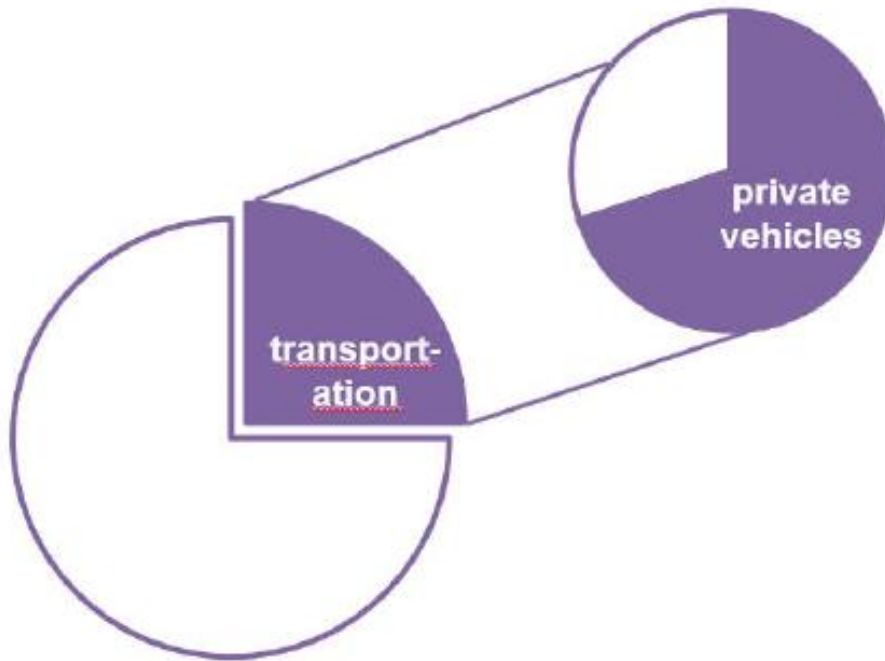
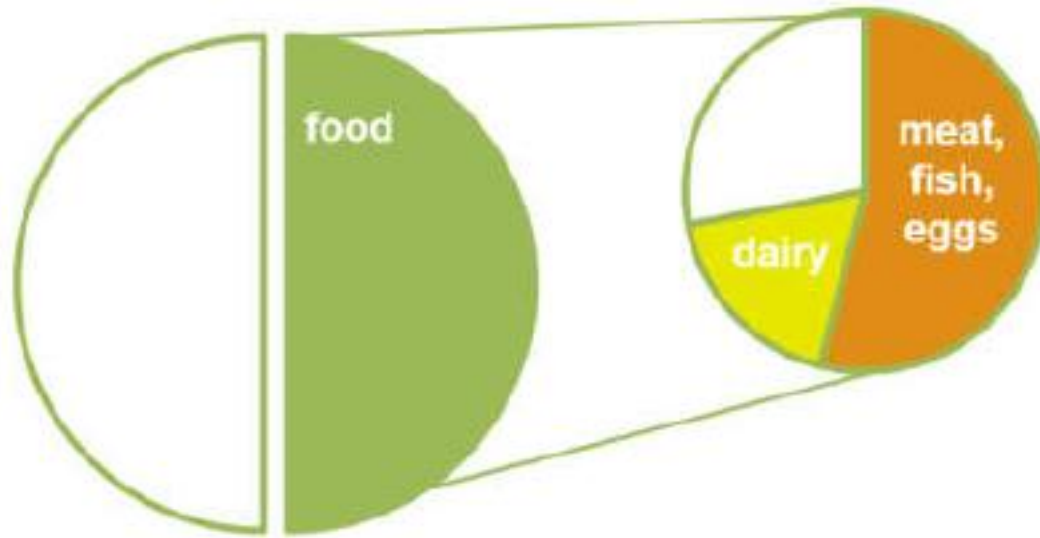


- *Waste/Consumables is a much lower component of the GPC inventory*
- *In the CBEI the largest impact is transportation (40%) followed by buildings*
- *Food has a much greater impact in the EF*

Source: Moore and Hallsworth, 2018



**Happily, there are many
health co-benefits . . .**



Source: One Planet Saanich Team, 2018



Suggested key steps:

Target approx 1.5 gha/person

Suggested change	EF reduction, gha/person
Eliminate fossil fuel emissions in buildings	0.41
Convert half of gasoline private vehicles to electric	0.18
Reduce purchase of non-food consumables by 30%	0.15
Reduce meat and dairy by 25%	0.12
Purchase 25% less food	0.11
TOTAL	0.97

Source: Moore and Hallsworth, 2018



Hope, vision and exciting opportunities

- **“Hope is . . . the commitment to positivity in the face of adversity”**

Dutt and Brcic, 2014

- **“Vision is values projected into the future”**

Clem Bezold, Institute for Alternative Futures

- **“In the midst of every crisis, lies great opportunity”**

Albert Einstein



This is exciting – we need

- **Visionaries, revolutionaries and evolutionaries**
- **Innovators, creators**
- **Communicators, cultural shifters**
- **Civic and political activists**
- **The new green and social entrepreneurs who will create the new economy we need.**



The civilising role of cities in the 21st century

- **Planetary health is about the health of human civilization and the state of the natural systems on which it depends”**

**Rockefeller-Lancet Commission
on Planetary Health**

- **Cities – together with agriculture - are the crucibles of civilization**



- **But surely it is uncivilised to undermine the very things we and our families, friends, neighbours and fellow citizens need for life and health**
- **Cities need to take up their civilising role in creating a just, sustainable and healthy future for all**



Contact

Dr. Trevor Hancock

Thancock@uvic.ca

Website:

<https://trevorhancock.org>