



Healthy One Planet Communities: Creating planetary, community and personal health

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Outline

1. Why nature matters for health

a) The global perspective

- Nature is our life support system

b) The local perspective

- Nature contact matters for wellbeing

2. Towards a One Planet community

a) City planning as if nature mattered

b) Take only our fair share of the Planet



1. Why nature matters for health

- **The global perspective**
 - **Its our life support system**
- **The local perspective**
- **Nature contact matters for wellbeing**



1 a) The global perspective:

**Nature is our life support
system**



The Earth is our Mother

Indigenous worldviews - Core features

- “the interactive relationship between spiritual and material realms, intergenerational and collective orientations, that Mother Earth is a living being”
- “locates humanity as part of Mother Earth’s ecosystems alongside our relations in the natural world.”

*Waiora – Indigenous Peoples’ Statement
for Planetary Health and Sustainable Development
23rd IUHPE World Conference on Health Promotion
Rotorua, Aotearoa New Zealand, April 2019*



This is Gaia

For the Greeks, Gaia was the goddess of the earth, one of the primordial elemental deities born at the dawn of creation. Gaia was the great mother of all creation.

<https://www.theoi.com/Protogenos/Gaia.html>



Athenian red-figure calyx krater C5th B.C., Virginia Museum of Fine Arts



This is also Danu

- **“Danu was the Mother Goddess, from whence all Irish gods descend; she was also the namesake of the Tuatha Dé Danann.”**
- **“it has been speculated that she was a wind or earth goddess as well. All things in Ireland depended upon her blessings. Her connection to the earth also tied her to the fairies, fairy mounds, and the many standing stones and dolmens of Ireland.”**



This is Gaia – or Danu

tánəx^w

GAIA

PACHAMAMA

TE WHENUA

पृथ्वी

地球

ERDE

LA TERRE

H ַרץ

כדור הארץ

الأرض

LA TIERRA





The Gaia Theory

- In the 1970s James Lovelock proposed the Gaia theory – “the Earth is a self-regulating system able to keep the climate and chemical composition comfortable for organisms.”
- “The Earth System behaves as a single, self-regulating system comprised of physical, chemical, biological **and human** components.”

Amsterdam Declaration on

Earth
System Science, 2001



Biophilia

“the connections that human beings subconsciously seek with the rest of life.”

E.O. Wilson

- **We may have an innate need for nature**
- **We evolved in natural environments**
 - **We seem to have an innate preference for the savannah**



Healthy people need healthy ecosystems

“Ecosystems are the planet's life-support systems - for the human species and all other forms of life. Human biology has a fundamental need for food, water, clean air, shelter and relative climatic constancy.”

Ecosystems and Human Well-being

Millennium Ecosystem Assessment, WHO, 2005



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.**”**

**Board of the Millennium
Ecosystem Assessment, 2005**



The ecological determinants of health

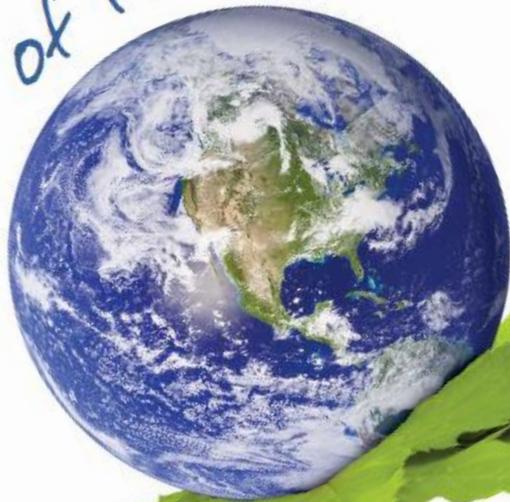
- **The Earth provides**
 - **Oxygen**
 - **Water**
 - **Food**
 - **Materials**
 - **Fuels**
 - **UV protection**
 - **Waste decomposition and recycling**
 - **A relatively stable and benign climate**
- **These are the most fundamental determinants of health**



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

https://www.cpha.ca/sites/default/files/assets/policy/edh-discussion_e.pdf

<https://www.cpha.ca/sites/default/files/assets/policy/edh-brief.pdf>

https://www.cpha.ca/sites/default/files/assets/policy/edh-discussion_f.pdf



Planetary health

“the health of human civilization and the state of the natural systems on which it depends”



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

It is time for a new discipline.



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, 2015**



Eroding the foundations of health

- **“The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.”**

**Sir Robert Watson,
IPBES Chair, 6 May 2019**



1 b) The local perspective:

Nature contact matters for wellbeing



We no longer live in nature

- **We are 80% urbanised**
- **We spend 90% of our time indoors**
 - **And 5% in vehicles**
- **So we are only outdoors 5% of the time (= 1 hour/day)**
 - **And 80% of that is in urban settings**
- **Kids don't go out and play**



Nature deficit disorder

Comes from the 2005 book

“Last Child in the Woods”

by Richard Louv

“I coined the phrase to serve as a description of the human costs of alienation from nature and it is not meant to be a medical diagnosis (although perhaps it should be), but as a way to talk about an urgent problem that many of us knew was growing, but had no language to describe it.”

Richard Louv, 2019



The child-nature connection



- **If we raise a generation of kids with no connection to nature, they won't understand, respect, cherish, nurture or protect nature**



The (physical) health benefits of nature contact

- **Greenspace exposure is associated with wide ranging health benefits**
 - statistically significant reductions in diastolic blood pressure, salivary cortisol and heart rate.
 - statistically significant decreases in incidence of pre-term birth, small size for gestational age, diabetes, all-cause and cardiovascular mortality
 - an increased incidence of good self-reported health

Twohig-Bennett C. and Jones A (2018)
A systematic review and meta-analysis



The mental health benefits of nature contact

- **CONSENSUS STATEMENT #1: Evidence supports an association between common types of nature experience and increased psychological well-being**
- **CONSENSUS STATEMENT #2: Evidence supports an association between common types of nature experience and a reduction of risk factors and burden of some types of mental illness**
- **CONSENSUS STATEMENT #3: Evidence suggests that opportunities for some types of nature experience are decreasing in quantity and quality for many people around the globe**

Nature and mental health: An ecosystem service perspective
Bratman et al, 2019



The social wellbeing benefits of nature

- **“there is less graffiti, vandalism, and littering in outdoor spaces with natural landscapes than in comparable plant-less spaces.”**

*Green Cities: Good Health (2010)
Urban Forestry and Urban Greening Research,
U of Washington*

- **Nature in high density urban living can reduce vandalism, violence, crime rates, ease racial tension or prejudices, and result in neighbourhood and personal transformation”**

*Healthy parks, healthy people (2008)
School of Health and Social Development,
Deakin Universit,*



‘Vitamin G’

**If this was a drug, we
would call it a miracle
drug!**



Roaming distance has shrunk

... even as our connectivity to and travel in the wide world has grown!

Who knew more about their community?

- Ed, or his great grandfather Jack?

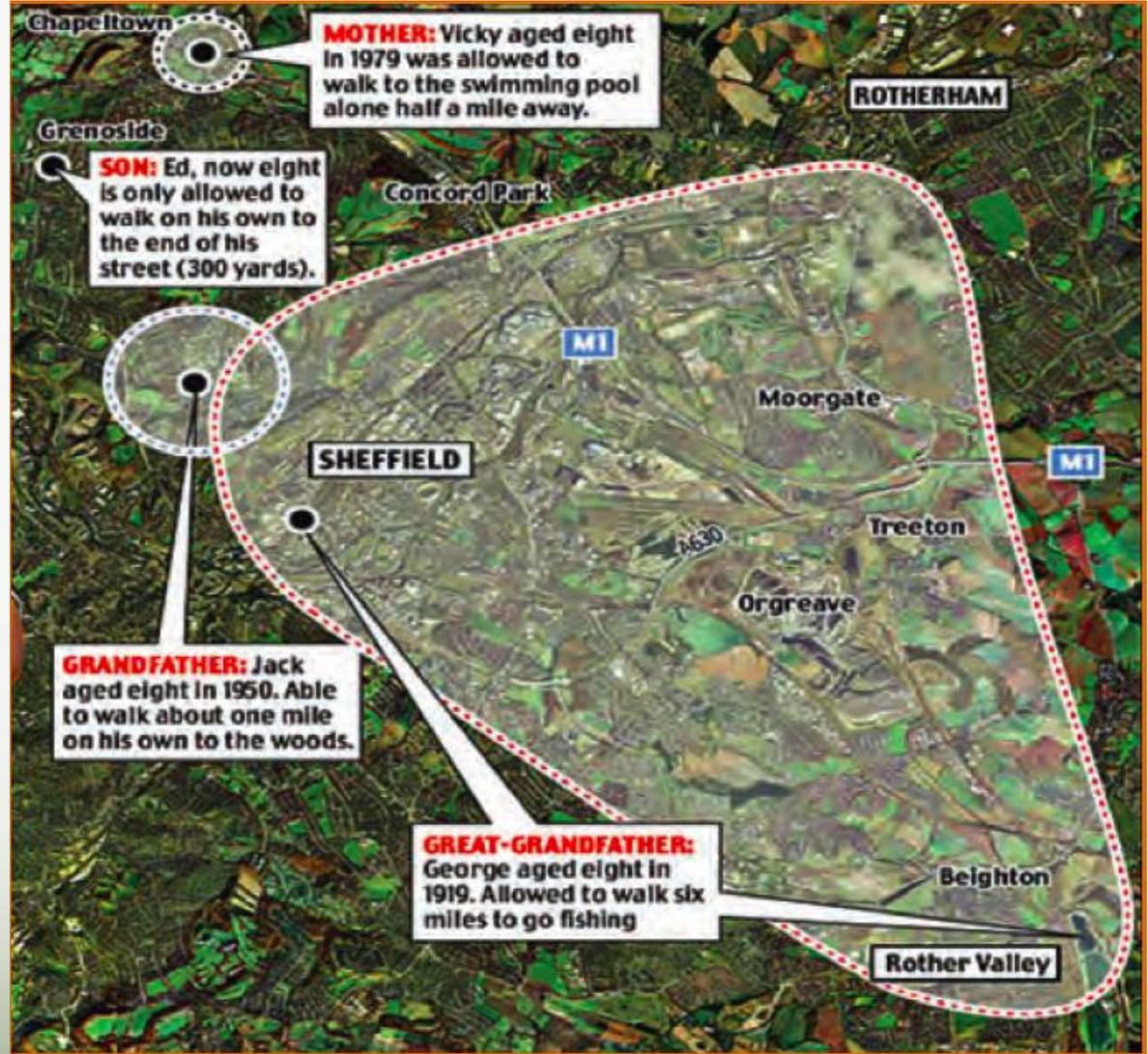


Figure 26: The Drastic Reduction in the Home Territory of 8-Year-Olds Across 3 Generations (Source: the Daily Mail¹²³).



Ways of engaging with nature

- 1. Viewing nature**
 - As through a window, or in a painting
- 2. Being in (the presence of nearby) nature**
 - May be incidental to some other activity
- 3. Active participation and involvement with nature**



Viewing nature

... has been linked to

- **Improved recovery in hospital**
- **Reduced stress in prison**
- **Improved student test scores**
- **Reduced job stress, improved job satisfaction**
- **Improved mood, reduced anger**
 - **‘Relaxed wakefulness’, ‘effortless attention’**

Healthy Parks, Healthy People, 2002



Being in nature

... has been linked to

- **A calming affect - relaxed and peaceful, positive mood**
- **Reduced mental fatigue and exhaustion**
- **“the natural environment has been found to have a restorative quality, particularly for people who live in urban environments. Natural places such as parks offer an opportunity to become revitalised and refreshed.”**
- **Increased physical activity**



Active involvement with nature

- **Gardening**
 - From house plants to urban farms
- **Walking/running/playing in the park**
- **Outdoor recreation**
 - Sport, exercise, birding, fishing, photography
- **Hiking**
- **Conservation and restoration**



It takes 2 hours a week

- **Compared to no nature contact last week, the likelihood of reporting good health or high well-being became significantly greater with contact ≥ 120 mins (e.g. 120–179 mins: ORs [95%CIs]: Health = 1.59 [1.31–1.92]; Well-being = 1.23 [1.08–1.40]). Positive associations peaked between 200–300 mins per week with no further gain.**



2. Towards a One Planet community



2 a) City planning as if nature mattered

“Build me a garden to grow people in”

James Rouse

Developer of Columbia MD



Because we are so urbanised

The challenge is not how to get people to nature, but how to get nature to people – in the settings where they live, learn, work and play

- Home
- School
- Neighbourhood
 - Streets, parks, gardens etc
- Work
- Hospital



The Different Environments of Nature and the Different Ways Children and Youth Can Experience Nature

(Adapted From the Child and Nature Alliance)

Source: Active Healthy Kids Canada (2011) *The Active Healthy Kids Canada 2011 Report Card on Physical Activity for Children and Youth*. Toronto: Active Healthy Kids Canada. (p 52)





Nature at home

- **House plants**
- **Balcony gardens**
- **Gardens**
 - **Do you have house plants?**
 - **Why?**
 - **It couldn't be because we crave nature contact, by any chance?**



Nature at School: Forest Schools & Nature KG

- **Forest School is an educational approach that fosters a connection to, and knowledge of, the natural world through repeated, regular access to local woodland areas, parks and outdoor classrooms through the lens of play-based and child-directed learning.**

<http://www.forestschoolcanada.ca/>



Nature in the neighbourhood

- **Street trees**
- **Neighbourhood gardens**
- **Street gardens**
- **Institutional greenery**
- **Guerrilla gardening**
- **Community gardens**
- **Parks**
- **Etc.**



Health benefits of urban parks

- **Physical (exercise)**
- **Social (being with others)**
- **Mental/emotional (relaxation, etc)**
- **Spiritual (connecting with nature)**
- **Ecological (air quality, temperature regulation etc)**

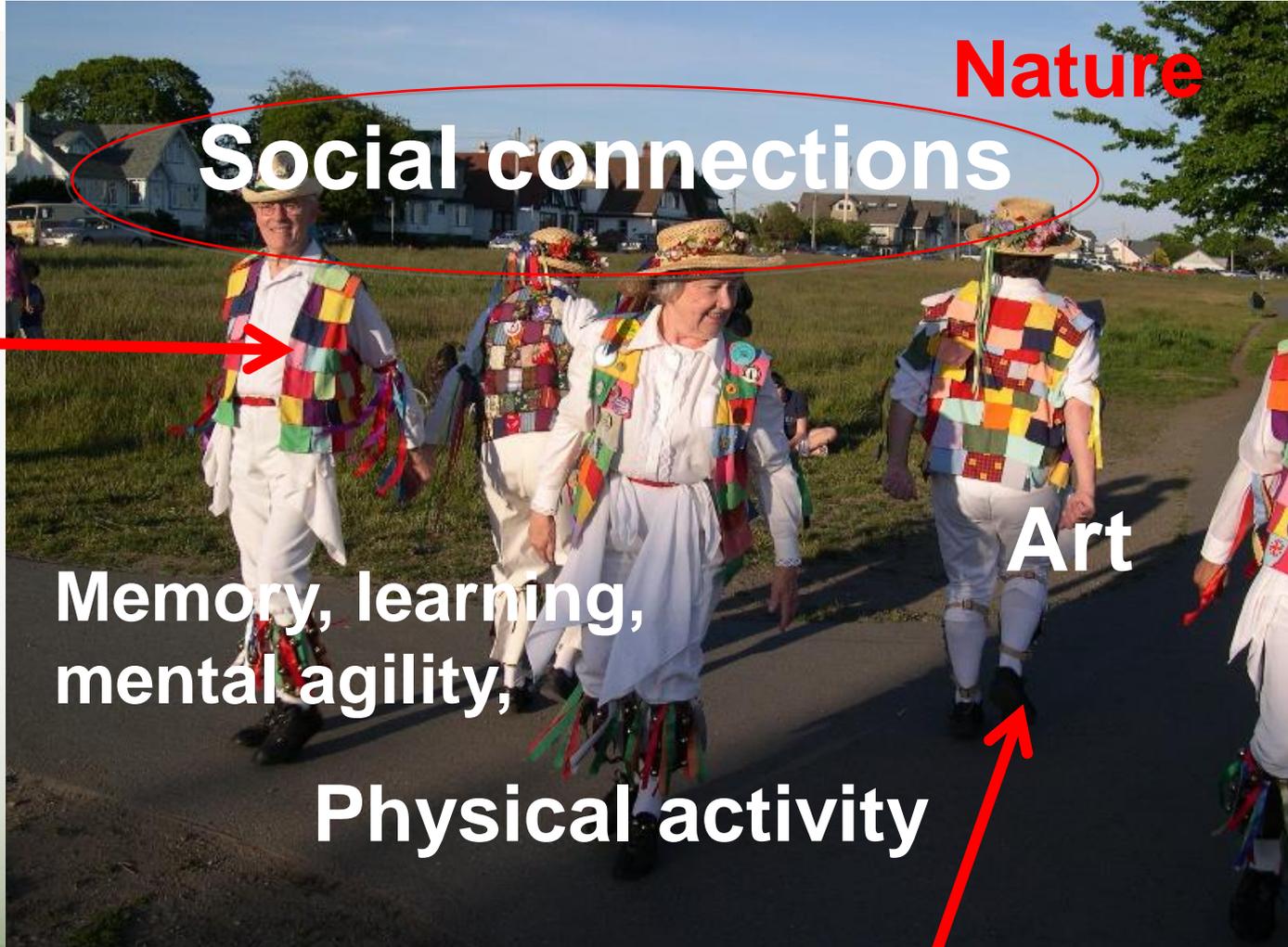


Don't forget dancing!





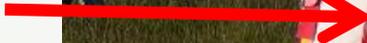
Hollytree Morris, Victoria BC, 2014



Nature

Social connections

89



Art

**Memory, learning,
mental agility,**

Physical activity



Who is this guy?



Nature at work

- **Plants, gardens**
- **Daylight**
- **Green walls, green roofs**
 - **Linked to increases in productivity**
- **Bio-walls (U of Guelph-Humber)**
- **“Living machine” sewage treatment**
 - **Body Shop, Toronto**



Nature in hospitals

- **Views**
 - **Pictures**
 - **Windows (Ulrich, 1984)**
- **Plants, fountains**
 - **Even in an ICU**
- **Healing gardens** (esp trees, greenery, flowers, water)
 - **Reduce stress, improve mood, increase satisfaction (patients, families and staff)**
- **Pets**

See www.Planetree.org



Nature for all

- **Given the inequalities in health we face, how do we ensure the most disadvantaged get the benefits that ‘Vitamin G’ offers?**
- **How do parks meet the needs of ethnographically diverse communities?**
- **Age–friendly parks?**
- **How do we bring nature indoors?**



The policy response: Proportionate universality

- “To reduce the steepness of the social gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage.” (Marmot Review, UK, 2010)
- **So people living in poverty need MORE parks, MORE beauty, MORE public transit, MORE energy efficiency etc. etc. to compensate for their disadvantage**



Beyond nature

CANADIAN INSTITUTE OF PLANNERS



**Healthy
Communities
Practice Guide**



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CIP Healthy Communities Practice Guide

- a healthy community must draw on other elements of the planner's skill set in order to truly address all the elements of a healthy place. This involves **a consideration of topics often in the realm of social planning, such as social development and mental health.** It can also involve broadening the definition of well-being to include **a truly holistic perspective on what makes us happy, successful, connected and healthy as human beings.** This could involve **exposure to a sense of wonder and awe, openness, authenticity, or spiritual contemplation.** It is the stuff that makes us grow as a community and as individuals, and connects us to our neighbours and to the world around us.



**Can you listen to the
sound of silence?**



Noise is . . .

- **“sound . . . that is loud or unpleasant or that causes disturbance”**

Oxford Dictionaries

- **“unwanted sound”**

World Health Organisation



Noise pollution

- **“is among the most frequent sources of complaint regarding environmental issues in Europe, especially in densely populated urban areas and residential areas near highways, railways and airports”**

WHO Europe, 2011

THE ENVIRONMENTAL NOISE DIRECTIVE

IN 2002, THE ENVIRONMENTAL NOISE DIRECTIVE 2002/49/EC WAS RELEASED TO MONITOR AND REDUCE NOISE POLLUTION.

MAJOR CITIES, WITH MORE THE 250.000 INHABITANTS, ARE OBLIGED TO IDENTIFY AND PROTECT “QUIET AREAS” IN CITIES AND OPEN COUNTRY.

ACCESS TO QUIET AREAS HAS POSITIVE EFFECT ON OUR HEALTH.

A COMMON METHODOLOGY TO IDENTIFY QUIET AREAS IS NOT PROVIDED.

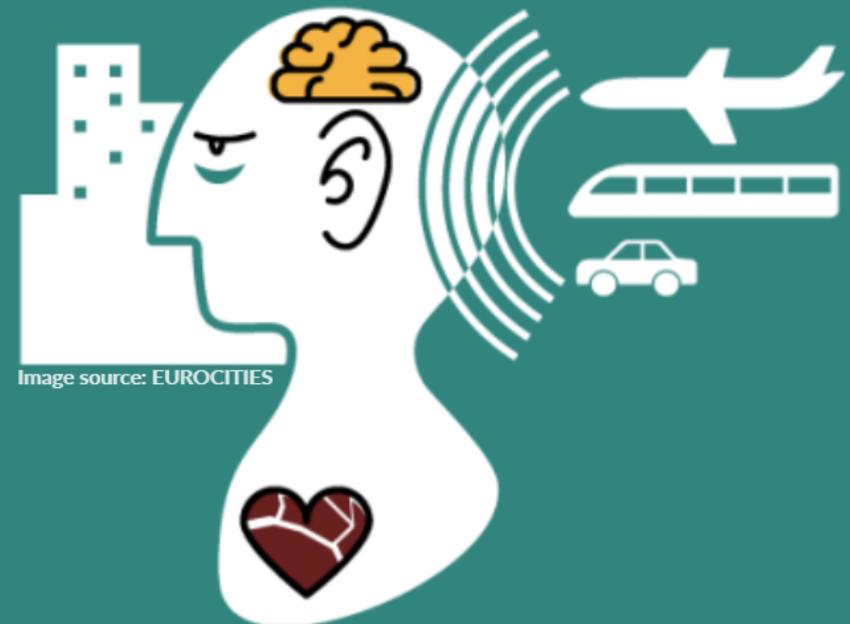


Image source: EUROCIITIES

IN THE 2014 GOOD PRACTICE GUIDE ON QUIET AREAS, THE EUROPEAN ENVIRONMENT AGENCY RECOMMENDS EXPERIMENTING WITH THE SOUNDSCAPE APPROACH.



Second-hand noise

- **“In a way that is analogous to second-hand smoke, second-hand noise is an unwanted airborne pollutant produced by others; it is imposed on us without our consent, often against our wills, and at times, places, and volumes over which we have no control.”**

Goines and Hagler

Southern Medical Journal, 2007



Noise is a civil rights issue



- **“Secondhand noise is really a civil rights issue . . . like secondhand smoke”**

**Les Blomberg,
Executive Director
Noise Pollution
Clearinghouse, 2005**



**Should we have the
right to quiet?**

THE HUSH CITY FRAMEWORK

AIM:

**TO EMPOWER PEOPLE TO IDENTIFY,
EVALUATE AND PLAN URBAN QUIET
AREAS, BY APPLYING THE SOUNDSCAPE
APPROACH & CITIZEN SCIENCE**

KEY ASSUMPTIONS

QUIETNESS AS A COMMONS

PEOPLE'S PREFERENCES AS A CRITERION

HUSH CITY APP AS A MEDIUM

HUSH CITY APP

A SOUNDSCAPE & CITIZEN SCIENCE MOBILE APP
(C) ANTONELLA RADICCHI 2017



 ABENDSCHAU



Beauty and health

What links

- Art
- Nature
- Cities and the built environment

BEAUTY!



Ahhh, but what is beauty

- **“Beauty is in the eye of the beholder”**
- **Challenging, perhaps even dangerous ground**



Deeper meanings of beauty

- **“That which stirs the soul”**

**Ann Petrie, Artist &
former CBC broadcaster**

- **That which “brings you joy”**

**Susanne Sklar, Academic &
William Blake scholar**

- **“that which makes life worth living. Any society that doesn’t respect deep pleasure or satisfaction to the mind is a mean society.”**

**Peter Schjeldahl, Art critic
*All from Beauty Will Save the World
Ideas, CBC Radio,
Thursday, June 10, 2010***



Surely something that .

■ ■

- **Gives intense pleasure or deep satisfaction to the mind**
- **Stirs the soul**
- **Brings joy**
- **Makes life worth living**

has got to be good for mental health, and since mental and physical health are intimately connected, is good for overall health



- **If so, when we build housing and schools and workplaces and hospitals and neighbourhoods that are ugly, what are we telling the people who live, learn, work or play in those places**



Can you see the stars at night?

“Light pollution is a major environmental and health problem, known to be associated with depression, insomnia and other health disorders in humans”

Falchi et al, 2019

Data courtesy Marc Imhoff of NASA GSFC and Christopher Elvidge of NOAA NGDC. Image by Craig Mayhew and Robert Simmon, NASA GSFC



If we can't see the stars .



- **Two-thirds of the U.S. population and more than one-half of the European population have already lost the ability to see the Milky Way with the naked eye.**

**The first World Atlas of the
artificial night sky brightness, 2001**

- **“When a 1994 earthquake knocked out the power in Los Angeles, many anxious residents called local emergency centers to report seeing a strange “giant, silvery cloud” in the dark sky. What they were really seeing—for the first time—was the Milky Way, long obliterated by the urban sky glow.”**

Chepesiuk, Env Health Persp 2009



**. . . how do we know
our place in the
universe?**



**2 b) Take only our fair
share of the Planet**



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





**While in Ireland you act
as if we had this . . .**





... when we actually
have this





The greatest challenge we face in the 21st century

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





We behave in my region
as if we have all this . . .



4

planets





**To get to a One Planet Region
– our fair share of the Earth -
means a**

**75% reduction in our
ecological footprint**

For you, it's a 67% reduction



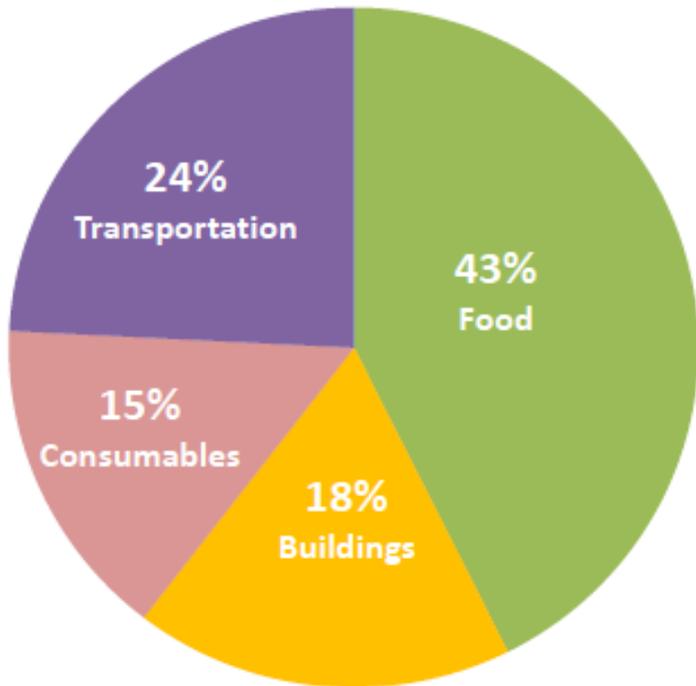
**“We need to reach a
social tipping point
before we reach a
planetary one”**

**Will Steffen
ANU and
Stockholm Resilience Centre**

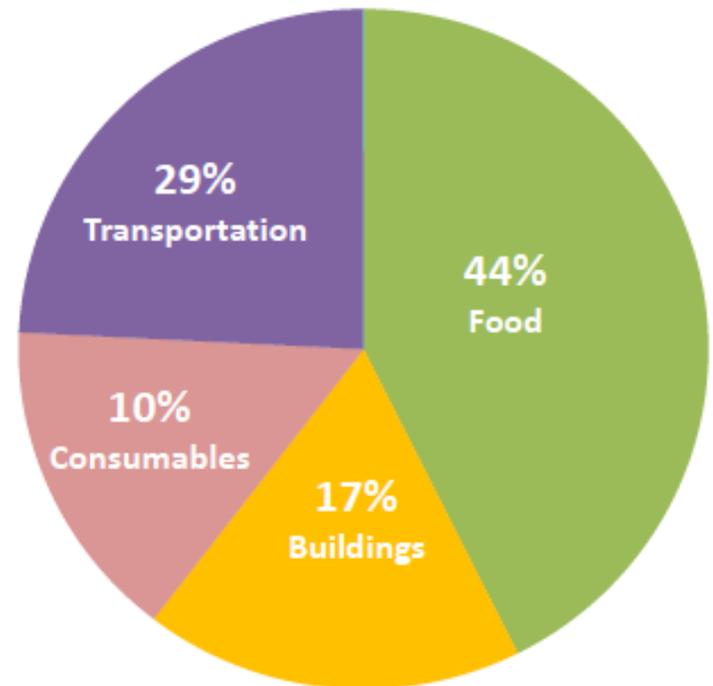


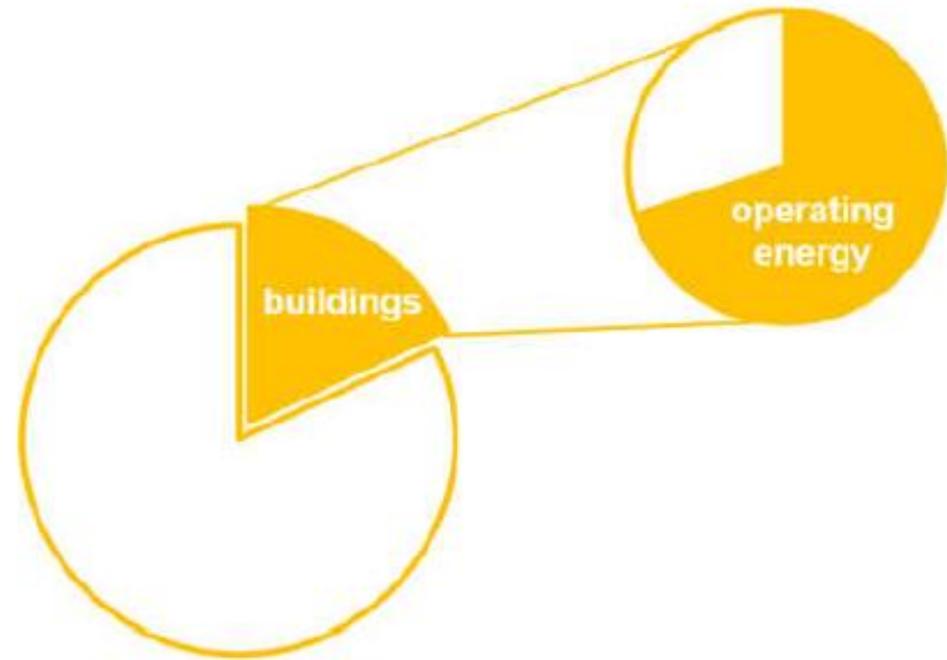
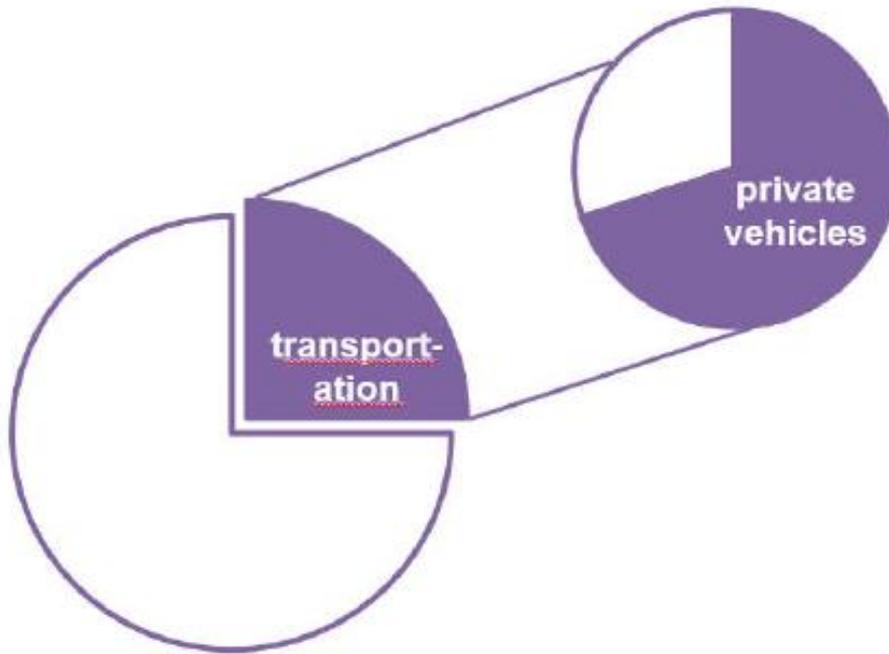
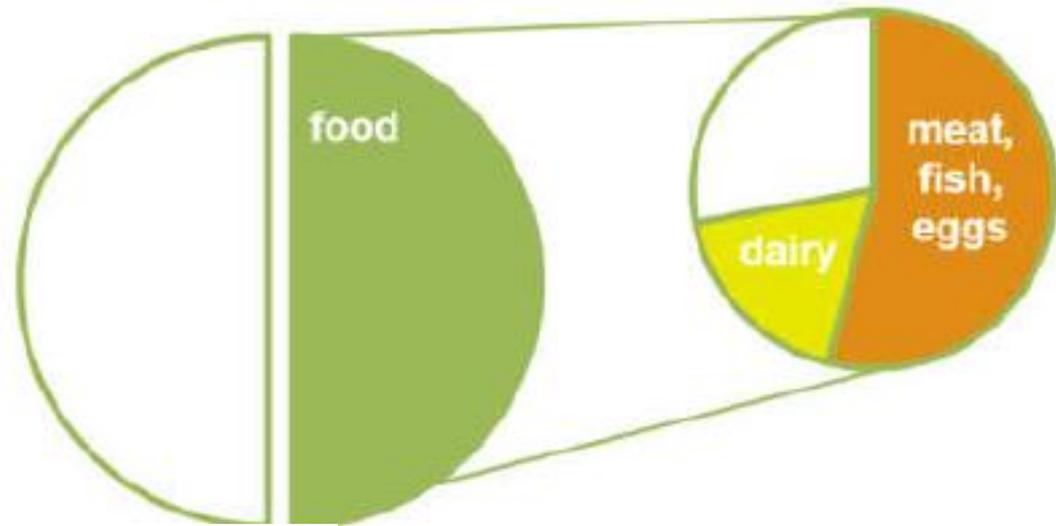
Local ecological footprint = 3 + planets

Victoria Ecological Footprint 



Saanich Ecological Footprint 







Bioregional's 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



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

**This is a wonderful opportunity (and challenge) if
you are concerned about**

- **Healthy eating, physical activity or obesity**
- **Health inequity**
- **Air pollution**
- **Healthy built environments**
- **Climate change**
- **Social capital**
- **Governance for health**

. . . . and many other issues



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://OnePlanetConversations.ca>



Getting to a One Planet Region

- **First we need to talk and learn about it**
- **Then we need to imagine it**
- **Then we need to design and build it**
 - **Physical, social, economic and cultural change**

Learn – Discuss – Imagine – Design – Create



Conversations For A One Planet Region

Learn – Discuss – Understand – Imagine – Design – Create

[Schedule of Upcoming Conversations](#)

[Click Here For The Fall Schedule](#)

We face two big challenges

1. We act as if we have several planets to sustain us when in reality we only have one.

So we have to learn to live within the limits of the one small planet that is our only home, in a way that is socially, culturally and ecologically just.

2. We are not talking about our local and global crisis, or what it means for us, our children, our communities and future generations.

If we don't learn, share and work together, we won't understand the challenges or opportunities we face, and we won't be able to imagine, shape and create a better future for all.

NEXT CONVERSATION

September 24th, 5 – 7 PM

Creating cultural change/evolution



[Click here to learn more about Creating One Planet Regions](#)



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