'One Planet' Cities 'One Planet' Swansea



DAVID THORPE



THE ONE PLANET LIFE



A BLUEPRINT FOR THE FUTURE David Thorpe

Foreword by BioRegional's Pooran Desai Introduction & Afterword by former Welsh Environment Minister Jane Davidson



What is a 'One Planet' City? It's time to end humanity's war on nature!

- Global wildlife populations have fallen by 60 per cent in just over four decades.
- Cities are like giant vacuum cleaners, sucking up resources from the rest of the planet.
- If they don't reverse this, they will die, like the Ouroboros, the mythical snake that ate its own tail.



But unlike the Ouroboros they won't be reborn. Civilisation will end.

The loss of nature



Ecological footprint Δ global hectares per person Overshoot 2 Ecological footprint = Biocapacity (supply) = Area x Productivity Demand = Population x Consumption per person x Footprint intensity 0 9°°° 2007 2000 an an an 399 2001 2003 2005 . 2016 20⁰,

Humanity's demand for goods and services from ecological systems is currently 75 percent higher than what the planet can renew today – GFN 4.19

Ecological Deficit

Ecological Reserve

Global Footprint Network, 2019 National Footprint Accounts

Biocapacity

Ecological Footprint

Planetary boundaries



Unequal consumption



Chapter 2: The threats and pressures wiping out our world page 33

1.7 global hectares is the available per capita share now

The equitable level is therefore equivalent to Africa's and India's today.

Cyprus as macrocosm



Akamos nature reserve

Kilani village terraces



Kate Raworth's doughnut

86% of the world's population lives in a country with an ecological deficit. I.e. its residents demand more from nature than the country's own ecosystems can regenerate.

71% of the world's population lives in a country with an ecological deficit and below world-average income.



The challenge

We must reduce our ecological footprint from this:



To this:



Contents

Foreword by Herbert Girardet

Introduction: It's time to end humanity's war on nature

1. Do the stories we tell influence the future we will live in?

2. The ultimate problem: humanity's limits to growth

3. Ecological footprinting and other standards

4. Choosing which standards to use



Dark, dismal without nature



Contents 2

- 5. Feeding cities while saving the planet
- 6. Regenerative cities
- 7. Zero carbon cities
- 8. Transforming industry to become 'one planet'
- 9. Managing water in the age of change
- 10. 'One planet' neighbourhoods
- 11. Buildings in a 'one planet' city

Contents 3

- 12. Mobility in a 'one planet' city
- 13. How smart is a 'smart city'?
- 14. Financing the way to a 'one planet' future
- 15. A menu of case studies
- 16. Wales and one planet development
- 17. Six steps to a one planet city
- 18. One Day in a One Planet City a short story

Hay Festival first cli-fi panel



Vauban – a real sustainable town



What a contrast!

We must imagine the future now By picking the best from the present And daring to dream further

> We must also take power from or work with those who would create the future for us.

The mainstream 'sustainable' 'smart' city features



What is the actual life cycle impact? Where does the food come from? Is the city really sustainable? Let alone regenerative? **How can we know?**

Copenhagen – carbon neutral by 2025 45% cycle to work.



But carbon and ecological footprints are still high - up to 4x average around the world.





The ecological footprint of cities

From the Global Footprint Network



Solutions!

The 5 basic 'One Planet' city requirements

- 1. That to aim towards one planet living should become an underlying principle of all planning and official policy as de facto the only objectively-verifiable regenerative strategy
- 2. That the same set of social and environmental criteria should be used to assess all planning applications and procurements
- 3. That these criteria should be informed by appropriate indicators including lifecycle and ecological footprint analysis, to enable all potential and actual projects to be compared and evaluated for their impacts
- Official policy should support all areas and sectors to use one planet living principles and methods to become more productive and more biodiverse – regenerative
- Reduction of excessive consumption should be the next social revolution: this entails doing more with less, and believing that meeting basic needs is sufficient for everybody

The 6-step path towards One Planet Cities / communities

1. Obtain community buy-in and feedback at all levels

- 2. Decide which standards and objectives to use
- 3. Set baseline the current situation

4. Set targets for each sector over realistic timescales

5. Set in place ways to measure them

6. Ratchet down consumption over one or two generations.

Well-Being of Future Generations Act





Supports the reduction of the ecological footprint of Wales and 46 other indicators of sustainability

Other supportive Welsh legislation

- Planning (Wales) Act 2015
- Environment (Wales) Act 2016
- Woodland and Forestry Policy
- Future of Land Management in Wales
- White Paper on Reforming Local Government (2017)
- National Development Framework consultation (2017-18)
- Inquiry into the Future of Agricultural and Rural Development Policies in Wales

Food connects everything - all the Sustainable Development Goals



The hinterland approach

cities used to feed themselves from the surrounding areas



Golden Horseshoe, incl. Greater Toronto area.
7 municipalities 10-year Golden Horseshoe Food and Farming Plan 2021:
•to grow the food and farming cluster
•to link food, farming and health through consumer education
•to foster innovation to enhance competitiveness and sustainability
•to enable the cluster to be competitive and profitable by aligning policy tools, and
•to cultivate new approaches to supporting food and farming.
Problem: big agriculture.



Ways to measure city sustainability: Wales

<u>Wales' Well-Being of Future Generations Act</u>:

- •Economic output Gross Value Added
- •Social Justice percentage of the population in relative lowincome households
- Biodiversity conservation status of priority species and habitats
 Ecological footprint national EF against the UK and global average

•Wellbeing - a standard set of 36 health questions which ask respondents about their own perception of their physical and mental health.

- •UN's Sustainable Development Goals
- •Carbon footprinting

Principles

- Get people together
- How will we improve biocapacity? get people growing
- How to manage water
- Sustainable sourcing of goods and services
- Go zero or net-positive carbon switch and save
- How will we get around?
- Closed loop systems of production and reuse
- Climate change adaption
- Make our neighbourhood serve us
- How will we get healthy?
- How will we complain and get justice?

Look for Win-win-win Solutions

Standards

- <u>For governance</u>: Wales' Well-being of Future Generations Act
- <u>For baselining</u>: Quantify the metabolism of the city with material flows
- For reducing the impact of consumption & increasing biocapacity: Ecological footprinting
- For carbon footprinting: PAS 2070
- For reducing the impact of imports and exports: the PRINCE model in Sweden, and EEMRIO ('environmentally extended input-output modelling')
- For promoting energy efficiency in organisations and industry: ISO 50001
- For environmental management: ISO 14001
- For promoting the circular economy: ISO 14040 Life Cycle Analysis
- For measuring the long-term value of local investments in infrastructure and natural capital: the Global Footprint Network's Net Primary Productivity and NPV+ tool
- A natural resources and biodiversity survey is also recommended.

Received wisdom is wrong

We are not stuck in a "Tragedy of the Commons" – rather we are stuck in the belief that we are trapped in such a "Tragedy of the Commons," waiting unnecessarily for others to act first.

PEOPLE POWER – CITIZENS' ASSEMBLIES

Let us act now!

Persuade any entity that spends money to do this.

It does not require the end of capitalism (which would take too long) but a new way of evaluating how money is spent.

Net Present Value Plus (NPV+)

- Expands on classical NPV.
- Compares different scenarios.
- Can help agencies evaluate how much their spending benefits social, financial and environmental criteria.
- ALSO clarifies what the assumed future is within which the spend has to operate.
- Ensures all relevant costs, benefits are counted.
- https://www.footprintnetwork.org/npvplus/

A simple solution

To make sure our investments (spending) are effective they need to pass two evaluations:

•Is the investment producing a positive financial return (ROI)? If it does not, the project will not be replicable. The higher the ROI the faster it can be scaled.

•Is the investment advancing resource security sufficiently rapidly (social and environmental benefits)? If not, the city or country will not be prepared for the future we can anticipate.

Ecological Footprint accounting

- Provides a biological view & joins all the human pressures – water, climate, biodiversity, food, energy, etc.
- Allows us to solve them all together.
- Results are understandable (unlike carbon).
- Makes the economic self-interest clear and obvious.
- Emphasizes resource security.
- Allows analysts to identify which options increase resource independence and by how much.

Contraction & convergence



CIRCULAR ECONOMY MODEL





Key questions

Where does Swansea want to be, resource-wise, in 2030 and 2050, to position itself for success?

What Ecological Footprint reduction does this imply?

Then identify: What is the financial budget of the city for projects (over the time period)?

By dividing the reduction by the available or expected budget (both for now to for instance 2030), one gets a benchmark figure, i.e., the minimal performance standard for all projects, and the cost.

Every project that does not beat this benchmark becomes a liability.

In a nutshell

- "You cannot go on destroying your environment because then your environment will destroy you.
- "So you really must realise what are your limits"
- "But even then you can still grow by making much more sophisticated choices."
- Pedro B. Ortiz, former Deputy Mayor and Director General for Metropolitan Planning at Madrid's Regional Government, author of The Art of Shaping the Metropolis.

It means system thinking change

Diolch yn fawr

David Thorpe hello@davidthorpe.info 07901 925671 theoneplanetlife.com