



EAUC Annual Conference University of Leeds 23 – 25 March 2015

CHALLENGING CONNECTIONS

Exchange B7: Nature: The Time for a Re-Think?

Richard James MacCowan, Director and Co-Founder, Biomimicry UK and Nick Taylor-Buck, Research Associate, The Sheffield Urban Institute

Conference Sponsor



CarbonCredentials

**Leadership and
Governance**



Richard James MacCowan
Leeds Sustainability Institute



Nick Taylor-Buck
Sheffield Urban Institute





Holocene – Favourable climate for the last 10,000 years

Anthropocene – Climate period created by humans – highest temperatures for 4,000 years

Implications for built environment:

- Increased peak cooling load
- Increased importance of facade performance
- Solar control requirements
- Flooding and water storage requirements
- Subsidence and soil shrinkage
- Storm damage

Resilience



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Key issue for built environment:

- **The capacity of a system to deal with change and continue to develop.**

Resilience-thinking



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The belief that humans and nature are strongly coupled to the point they should be conceived as one social-ecological system.

(Stockholm Resilience Center, 2013)

Biomimicry 101



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BIOMIMICRY is the mimicking of nature. It is **NOT** the solution, but a way to **FIND** solutions by looking at natural forms, materials, processes, functions and systems.

Guidance via:

- **Metaphor**
- **Technical frameworks**
- **Direct emulation**

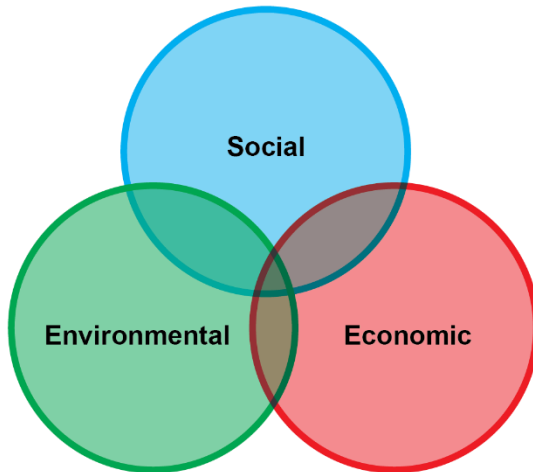
Notion of Sustainability



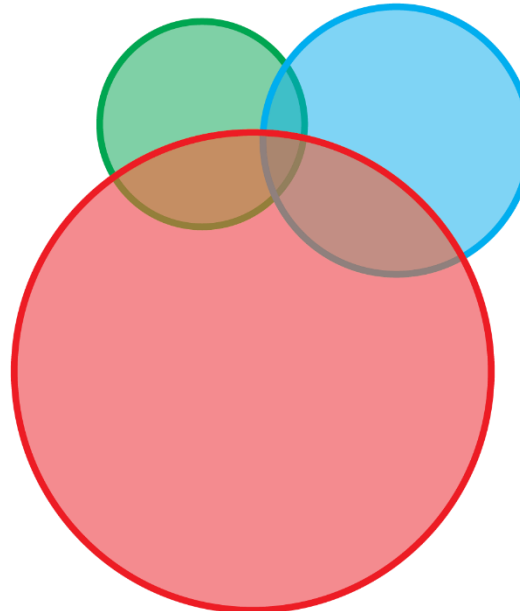
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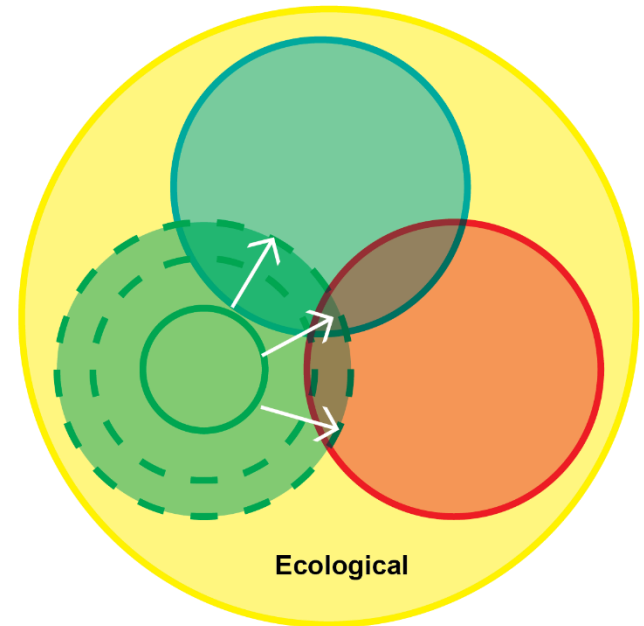
A. The Theory



B. The Reality



C. The Change Needed



Case Study - Alloa



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Facts:

- 20,390 residents
- Former port town
- Declining industry



Economy



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Potential:

- New startups
- Tourism designation
- New economy



Potential:

- Health & wellbeing
- Reduction in GP visits
- Connect community



Potential:

- Beyond net-zero developments
- Green Infrastructure
- Closed-loop systems

Ecology (or Planet Earth!)



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Potential:

- Flooding
- Food security
- Climate change

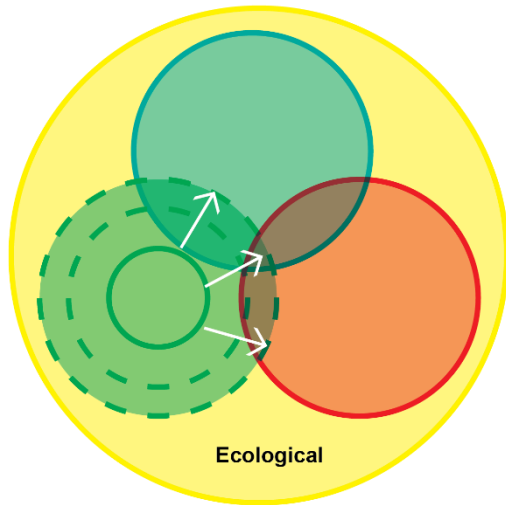


Image source: Blue Marble (Planet Earth) by woodleywonderworks CC 2.0 flickr.com

Bringing it all together



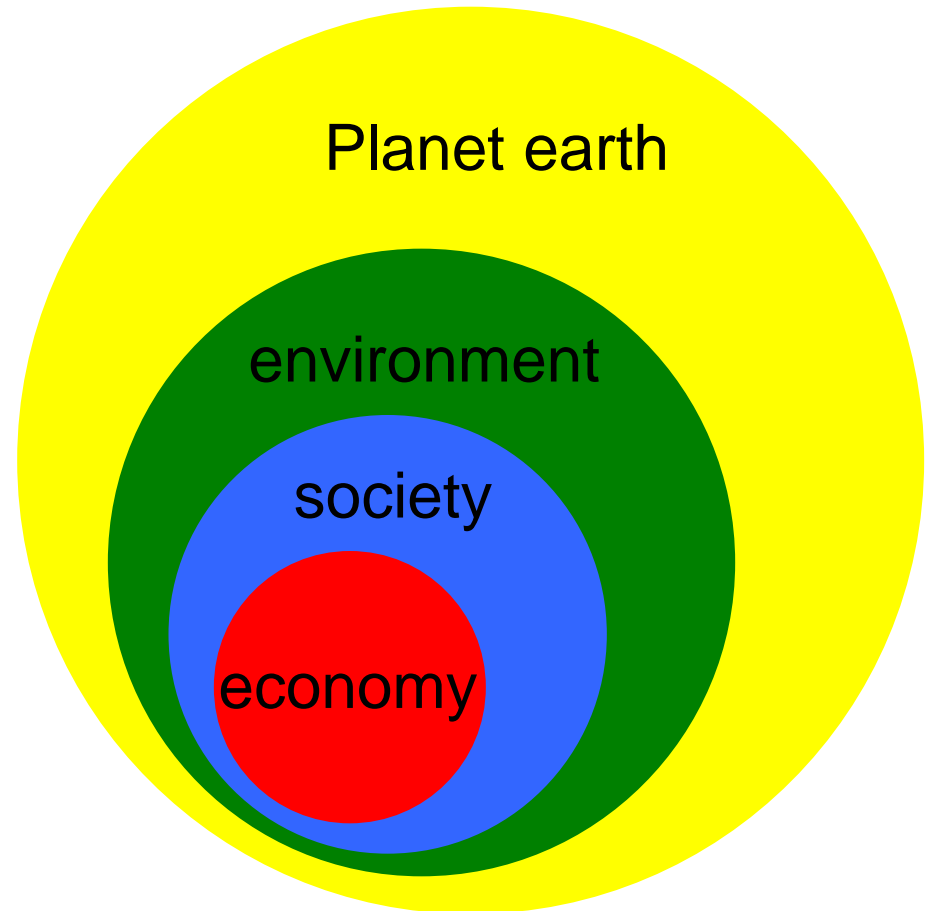
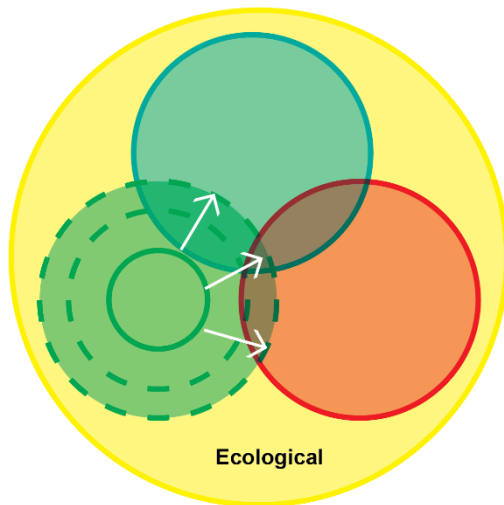
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Bringing it all together



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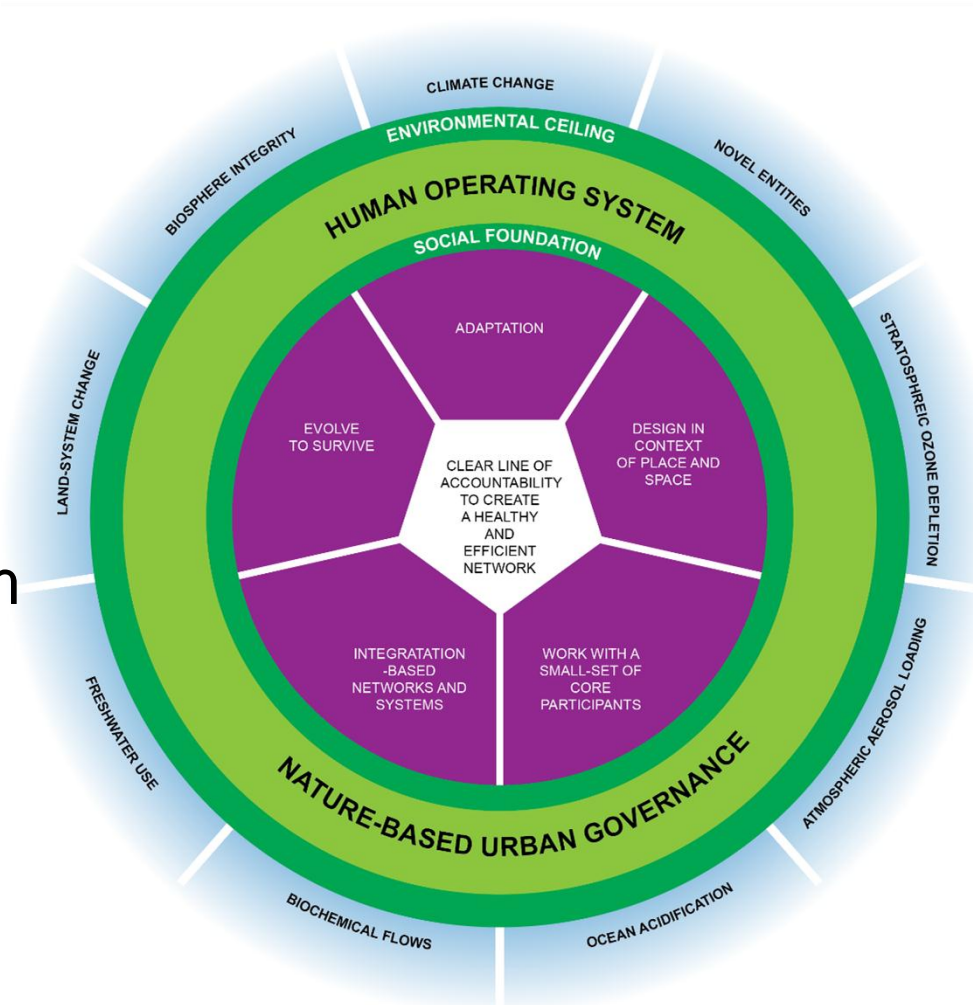
Nature-based Urban Governance



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1. Effective networks
2. Five drivers for change
 1. Adaptation
 2. In context
 3. Small core
 4. Integration
 5. Evolve
3. Social Foundation
4. Human-operating system
5. Environmental Ceiling
6. Planetary Boundaries



Discussion



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Thank you for listening....

