Viikki Sustainability Research Seminar 5.11. 2024

Ten years of sustainability transformation research: lessons learnt and ways ahead

STRONG SUSTAINABILITY: DOUGHNUTS AND WEDDING CAKE?

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Planetary boundaries framework

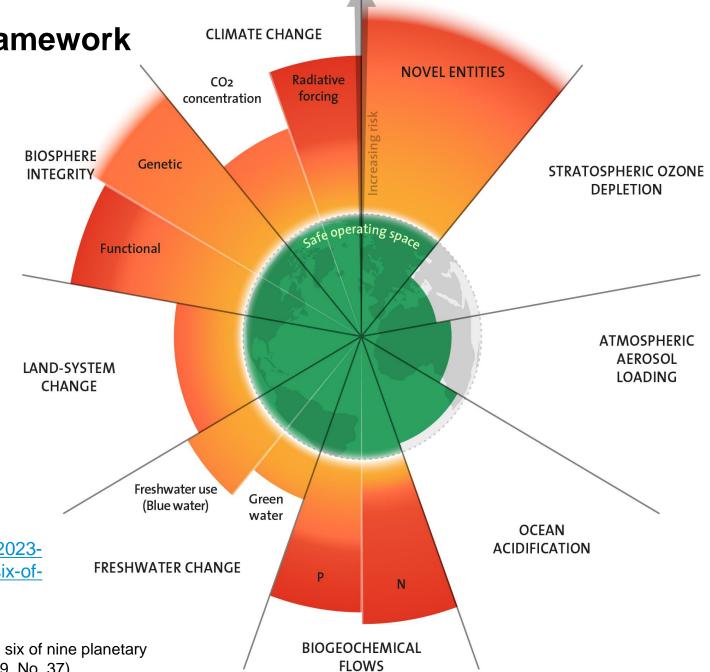
First introduced in 2009

 "...it highlights the environmental consequences of living in the Anthropocene, and our responsibility as future stewards for the planet" Ingo Fetzer, SRC

https://www.stockholmresilience.org/research/research-news/2023-09-13-all-planetary-boundaries-mapped-out-for-the-first-time-six-of-nine-crossed.html

HELSINGIN YLIOPISTO HELSINGFORS UNIVERSITET UNIVERSITY OF HELSINKI

(Richarsson ym. 2023. Earth beyond six of nine planetary boundaries. *Science Advances*, Vol. 9, No. 37).



SUSTAINABLE GALS DEVELOPMENT GALS









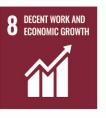


































Six Transitions: Investment Pathways to Deliver the SDGs (UN 2023)

- Key transitions with catalytic & multiplier effects across the SDGs
 - 1. Food systems
 - 2. Energy access and affordability
 - 3. Digital connectivity
 - 4. Education
 - 5. Jobs and social protection
 - 6. Climate change, biodiversity loss and pollution

Adopted by UN members in 2015

Legally non-binding policy objectives for 2030



EEA CLUSTERS (2023): DRIVERS OF CHÀNGE

- Cluster 1 A growing, urbanising and migrating global population
- a An ageing and stabilising European population facing global growth
- b People on the move
- c More people in urban areas

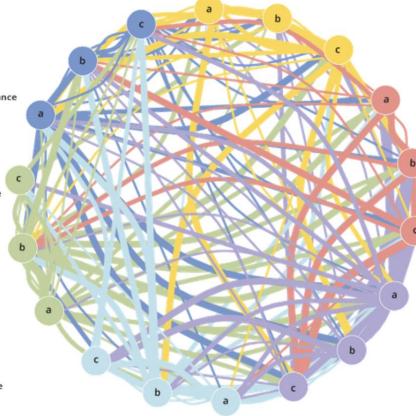
- 1 Growing, urbanising & migrating global population
- 2 Climate change & environmental degradation worldwide
- 3 Increasing scarcity of & global competition for resources
- 4 Accelerating technological change & convergence
- 5 Power shifts in the global economy & geopolitical landscape
- 6 Diversifying values, lifestyles & governance approaches





Evolving governance

challenges and approaches



Cluster 5

Power shifts in the global economy and geopolitical landscape

- a Global changes in economic power
- b Contrasting fortunes in the global economy
- Geopolitical power shifts, tensions and uncertainties



a Accelerating global demand for energy

Increasing scarcity of

Cluster 3

Cluster 2

Climate change

and environmental

degradation worldwide

a Accelerating climate

change and increasingly severe consequences

b Increased pressures on

c Increasing environmental

pollution and chemical

ecosystems and

biodiversity

pressure

- b Growing demand for materials worldwide
- c Ever increasing demand for land, food and water



Cluster 4 Accelerating technological change and convergence

a Changing landscape of technological innovation

b Acceleration, hyperconnectivity and

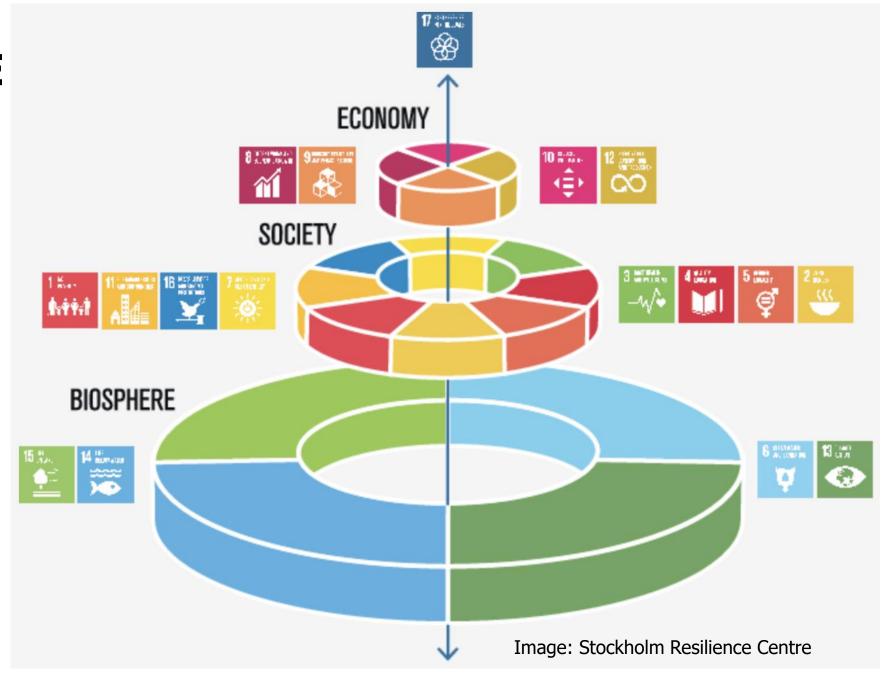
co. ergence

Image: European Environment Agency

Screenshot

WEDDING CAKE

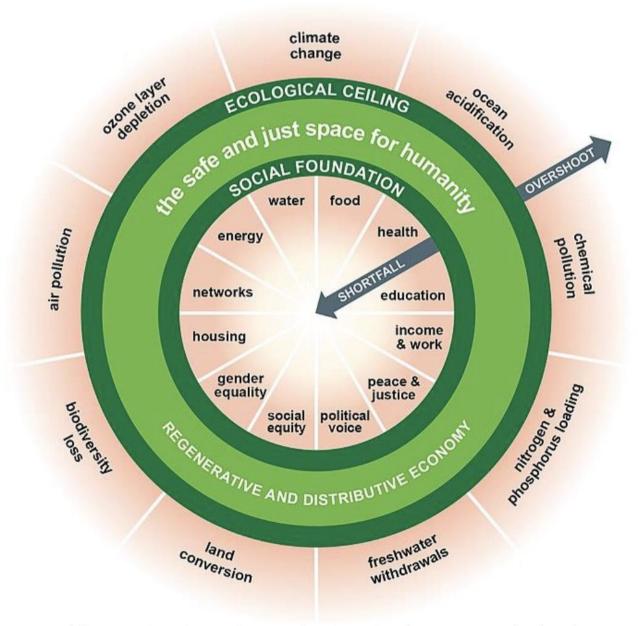
- SRC 2016
- Illustrates that economies and societies are embedded in and dependent of the biosphere



OR DOUGHNUTS?

Raworth's doughnut model (2017)

- Presents the safe and just space for humanity
 - Balanced between overexploitation and insufficiency
- Economy presented as an aspect of human societies, not an entity of its own



Source: https://upload.wikimedia.org/wikipedia/commons/1/12/Doughnut_(eco nomic_model).jpg

MULTISPECIES SUSTAINABILITY

Critique:

- The previous models are too anthropogenic and fail to represent other than human species
- They oversimplify the representation of all species into e.g. "BD loss"
- Multispecies decision-making

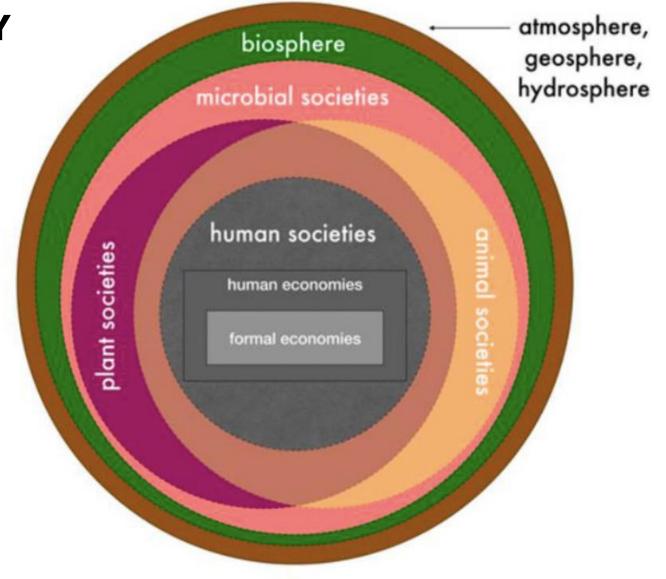
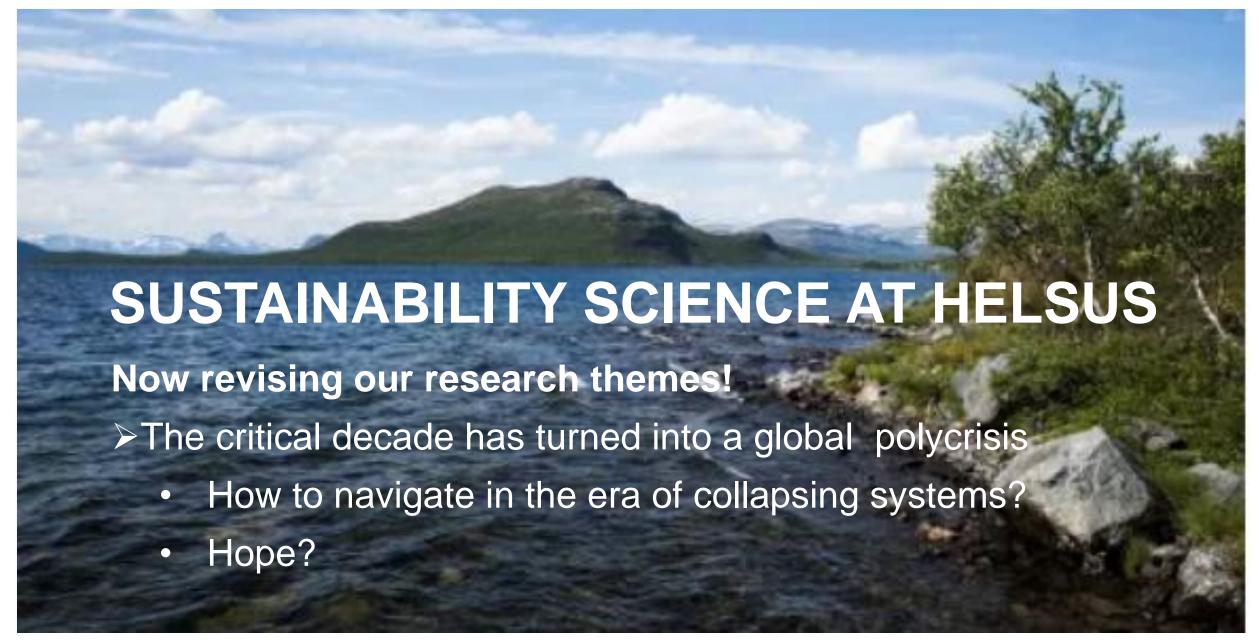


Fig. 3. Visual model of multispecies sustainability focused on interdependence. Elements depend on those containing them, and are affected by those they contain.



HELSUS focuses on **strong** (deep) **sustainability**, an approach that is based on systems thinking and recognises the planetary boundaries as definite.

