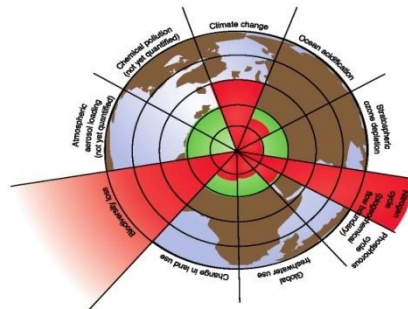


Degrowth and Planetary Boundaries

How should the degrowth movement address the issue of planetary boundaries?



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Project

- Part of a small project on how to use limits and boundaries concepts within a social ecological economics, including
 - Governance, deliberation, participation
 - Social and environmental justice
 - Instrumentalism versus intrinsic nature
 - Philosophy of science issues
 - Regional and local planning
- Work in progress

Context

- Earlier degrowth conferences have suggested to develop indicators to measure environmental pressure and sustainability, referring to e.g. sustainable levels and ecological footprint
- This conference: an element in building a social and ecological economy is respecting the planetary boundaries
- The «planetary boundaries» framework was published by Rockström et al. in (2009) – already 919 citations

Outline

1. A critical look at Rockström et al. (2012) and the limits discourse more generally
 - Democracy, purpose of development, instrumentalism
 - Quantifying uncertainty
2. We need concepts for dealing with limits!
3. To quantify or not to quantify?
4. Preliminary conclusions

Part 1

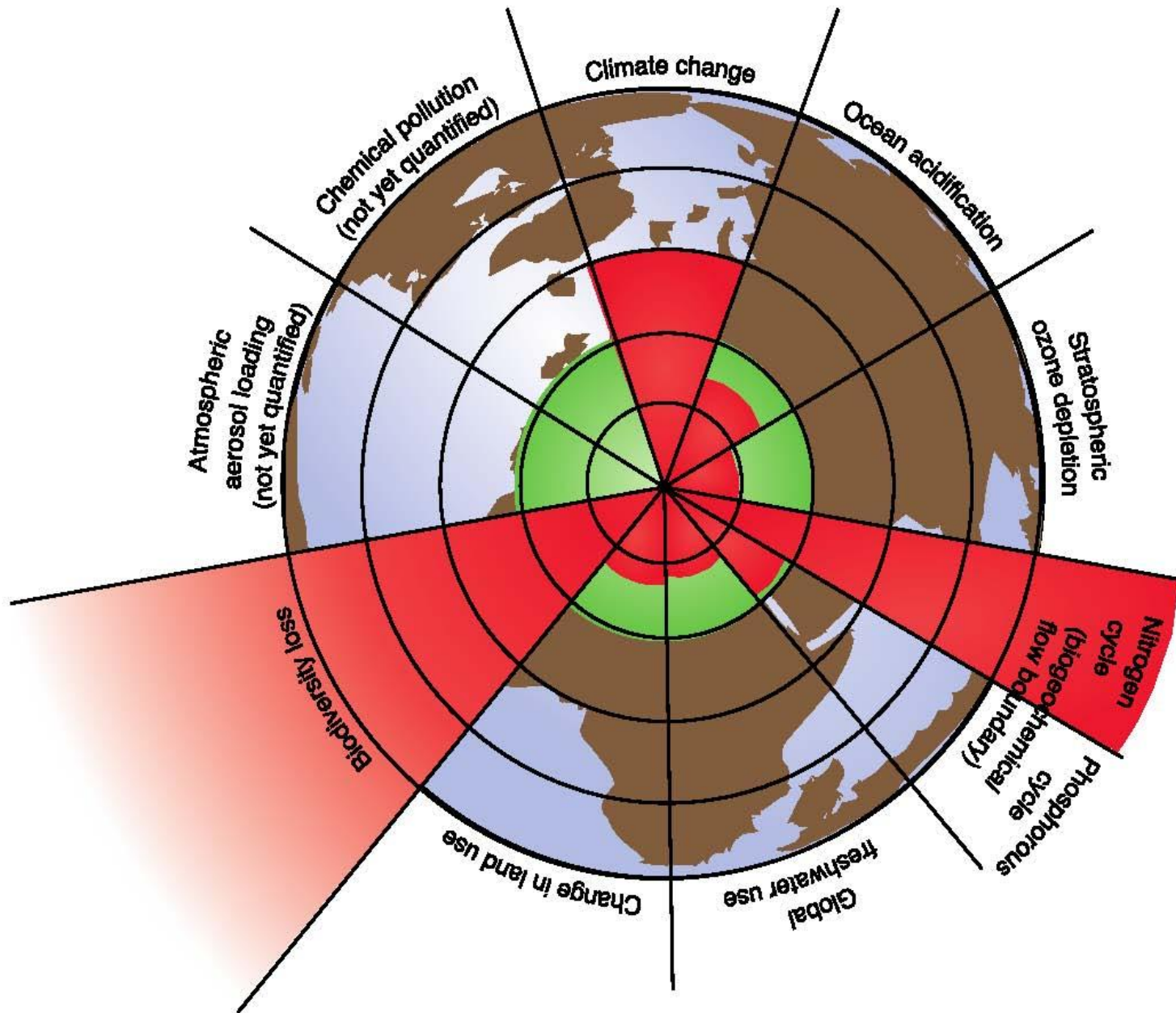
A critical outlook

The idea of limits and boundaries

- Hardin (1968): *Tragedy of the commons*
- Erlich (1968): *Population bomb*
- Meadows et al. (1972): *Limits to growth*
- Daly (1977): *Steady-state economics*

- Rockström et al. (2009): *A safe operating space for humanity*
- The framework of 9 planetary boundaries, each representing a vital life support system

Planetary boundaries



Source: Rockström et al. (2009)

The limits discourse

- A challenge is the discourse already established around such concepts
- Natural science background, a particular way of presenting humans and society:
 - human population/humanity as one aggregate entity
 - to be monitored through statistics and controlled by government policy
 - no agency, merely acted upon (Dryzek, 2013)
- Malthusian, survivalist

The authoritarian limits discourse

- Using metaphors relating to crisis and survival on a general level
- Tend to appeal to scientific expertise and authoritarianism
- E.g. Lovelock:
 - «Even the best democracies agree that when a major war approaches, democracy must be put on hold for the time being. I have a feeling that climate change may be an issues as severe as a war. It may be necessary to put democracy on hold for a while.»

(in Dryzek 2013: 39)

Goals for Development

- Does not question the current kind of development. Rather, it suggest stabilising the Holocene so we can continue this kind of human development
- Surpassing the suggested climate boundary would «severely challenge the viability of contemporary human societies»
- Last sentence: «The evidence so far suggests that as long as the thresholds are not crossed, humanity has the freedom to pursue long-term social and economic development»

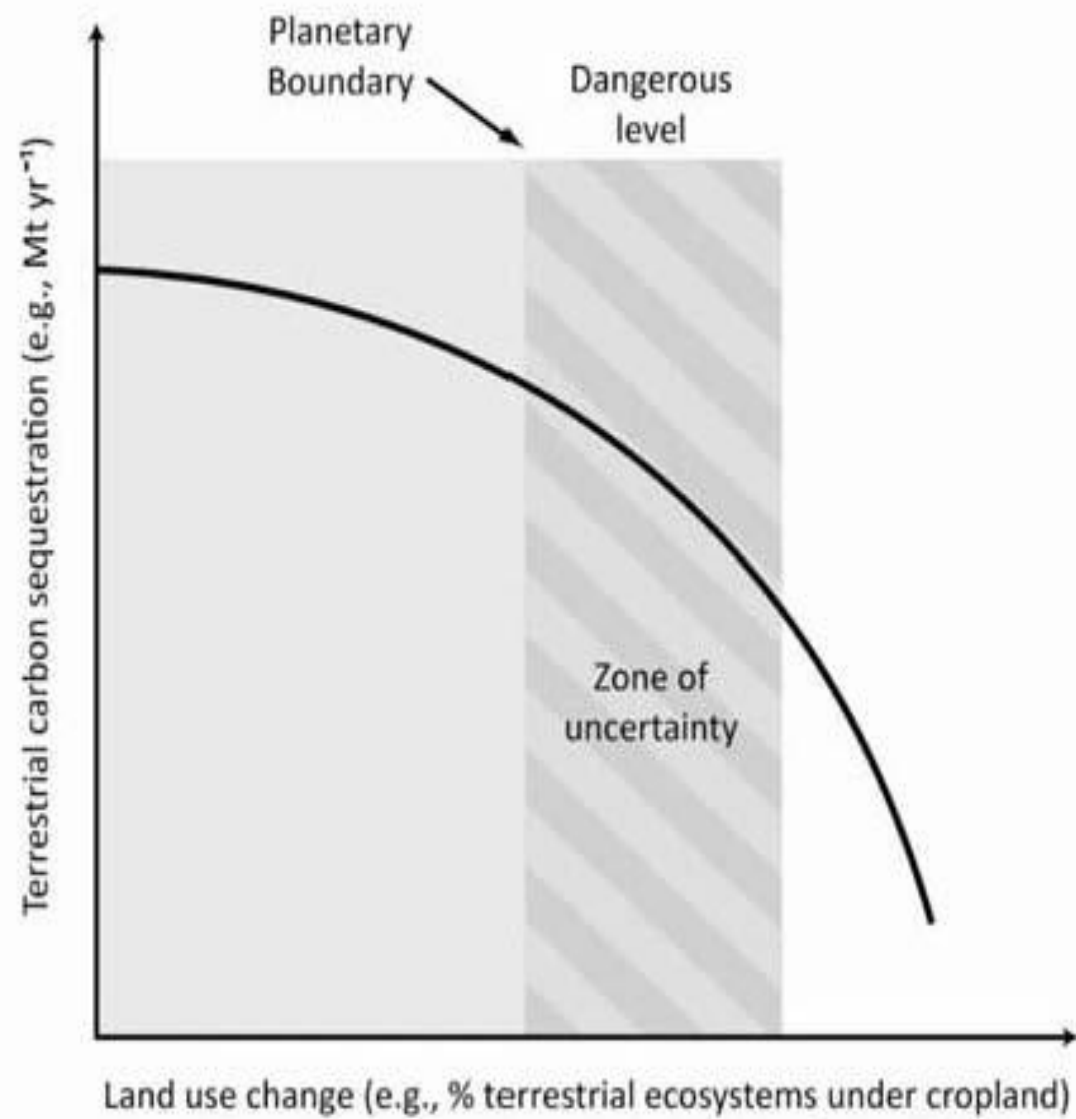
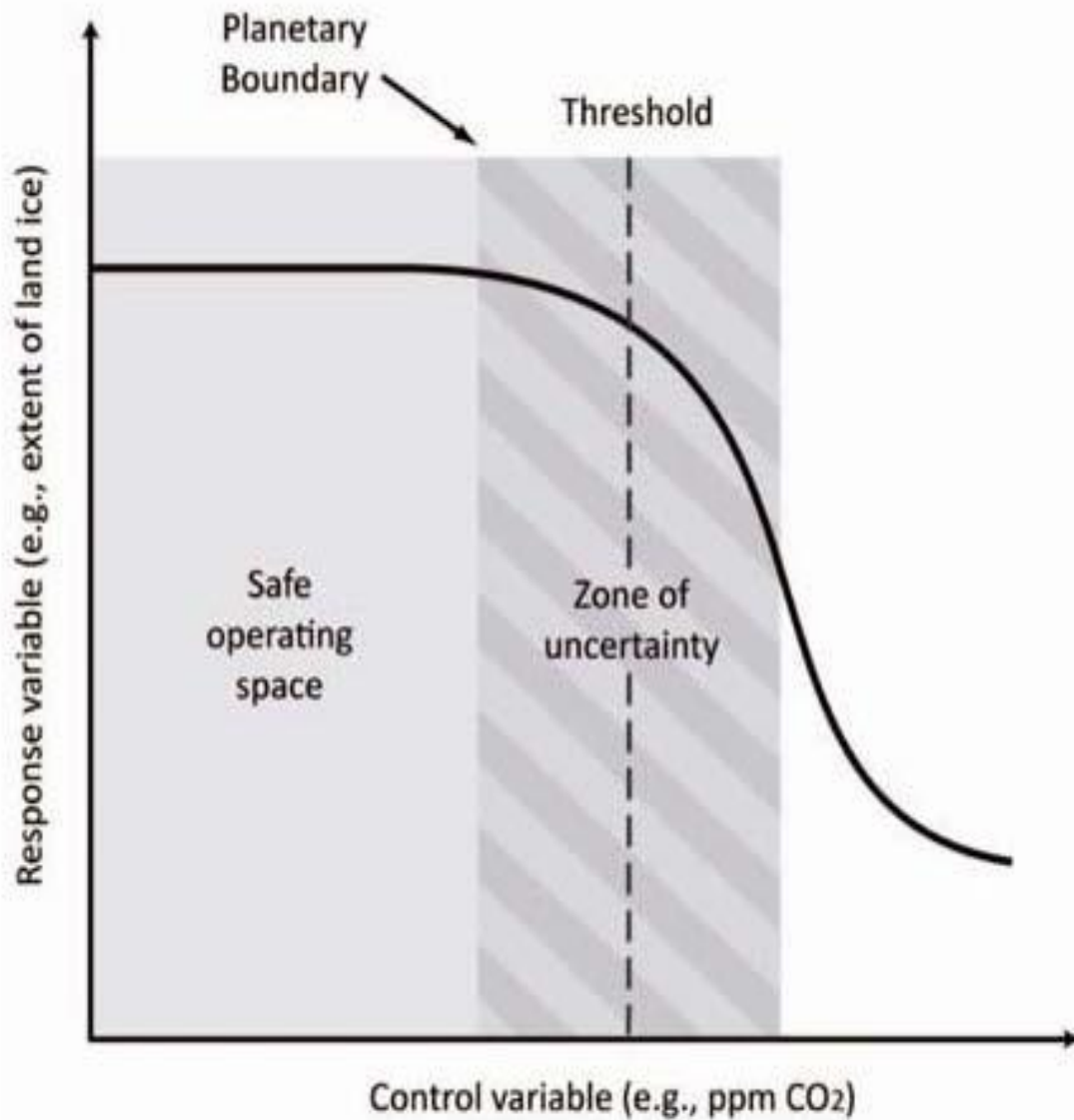
Instrumentalism

- Rockström et al suggest that 30% of all mammal, bird and amphibian species will be threatened with extinction this century
- Now this is not presented as a problem in itself, but may have «pervasive effects on how the Earth system functions»
- Since science cannot (yet) provide quantitative information about how much and what kinds of biodiversity can be lost before the resilience is eroded, Rockström et al has set the boundary indicator to 10 times the background rate of extinction

Instrumentalism (cont.)

- Builds on amongst others ecological economics, drawing on knowledge of the essential role of the life-support properties of the environment for human wellbeing.

Quantifying uncertainty



Quantifying uncertainty (cont.)

- Rockström treats risk and uncertainty as similar things
- While uncertainty in the post-normal science or Keynesian sense is something that cannot be quantified
- Instead a recognition of our ignorance
- Things change and co-evolve, and new constellations emerge which we cannot predict

Part 2

**IS PLANETARY BOUNDARIES RELEVANT FOR
DEGROWTH?**

Limits ontology

Biophysical limits are part of the basic ontology of Degrowth

- From Paris declaration 2008:
 - «reducing the ecological impact of the global economy to a sustainable level»
 - «the capacity of our ecosystems»
- If this is a basic premise or belief about the world, then we need to conceptualise them as a part of our theoretical framework

Need to go beyond unclear positions

Giorgos Kallis at Degrowth summer school in Barcelona 2014:

- Degrowth is about self-limitation, not external limits
- There is no absolute limit independent of us
- The environment does condition what we can do

Absolute limits or social construction?

- A tendency in degrowth to flirt with postmodernism and appealing to a language of «narratives», «stories», «imaginary» etc. At the same time referring to limits. This is impossible!
- We need to think this through principally
- If we believe in natural limits then we need a way to deal with that
- If we use a critical realist approach instead of vacillating between empiricism/positivism and social constructivism – then we can handle this!

Some elements of critical realism

- There is a reality independent of our knowledge of it
- Reality (ontology) must therefore be kept separate from our knowledge of it (epistemology)
- Knowledge in terms of conceptualisation and theories are social constructs, and hence fallible
- Reality might not be equal to our senses. Hence, the limits of empiricism. Causal mechanisms have to be theorised. Causality can not be understood through statistical tests.

Part 3

To quantify or not to quantify?

To quantify or not to quantify

- Yes, we need conceptualisation of limits, but is quantification and simplification into simple categories the best way?
- Many myths and claims about this, but little research within Ecological economics or degrowth
- However, in other fields (accounting studies, sociology of quantification, studies in technology and science), there exists by now a body of literature on how numbers function as technologies of governing and on the effects of quantification

Attention and communication

The problem is that we very quickly leave the arena of natural science and enter instead the field of communication and attention seeking («wake up call»), political pragmatism

E.g. O'Neill (2012) claims (without reference):

- Against quantification: risk of serving the abstract quantified indicator instead of concrete qualitative goal, attention to what is easy to measure
- For quantification: «measure to manage», «what gets measured tends to get done», communication tool to raise awareness

Theories of numeracy

- We shouldn't forget that the introduction of using indicators or the slogan of «measure to manage» are strongly related to the current managerialist and neoliberal era.
- While it is clear that measurement and numbers helped put the environment on the agenda in the first place (e.g. Asdal 2011), that does not mean that numbers will continue to play the same role in the current political system and climate
- So we should also be clear about the purpose of our indicators: are they meant to enter the current system or to be used in our «utopia»?

Distinguish

- The pragmatic position that simple numbers as communicative tools hoping they will make people wake up and make a change in the current political system

AND

- The scientific position wanting to increase our understanding and knowledge about boundaries, limits, thresholds etc.

Part 4

Preliminary conclusions

Planetary boundaries for degrowth?

- «Planetary boundaries» makes sense as a general concept from a degrowth perspective
- Degrowth believes in limits. We need to clarify in which way and conceptualise them
- But... probably not in the way they are operationalised by Rockström et co.
- An alternative concept of limits or planetary boundaries must avoid treating nature as a mere instrument for humans
- A fine line to balance between the already established limits discourse and one that takes environmental and social justice into account

Thank you!

Literature

Asdal, K. (2011): The office: The weakness of numbers and the production of non-authority, in *Accounting, Organizations and Society*, Vol. 36, pp. 1-9.

Dryzek, J. (2013): *The Politics of the Earth*. Environmental Discourses. Oxford University Press, Oxford, 3rd edition.

O'Neill, D. (2012): Measuring progress in the degrowth transition to a steady state economy, in *Ecological Economics* Vol. 84, pp. 221-231.

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Rockström, J. et al. (2009): Planetary boundaries: Exploring the safe operating space for humanity, in *Ecology and Society*