Provisioning systems for a good life within planetary boundaries

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Provisioning systems for a good life within planetary boundaries

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Highlights

- We explore the emerging concept of provisioning systems, and provide a definition.
- We analyse relevance of 6 theories to provisioning systems in a safe and just space.
- No theory is all-encompassing, and most fail to prioritise well-being.
- We identify 6 provisioning elements linked by feedbacks and power relations.
- Appropriating systems that extract rents are in conflict with meeting human needs.

Abstract

The concept of provisioning systems has recently emerged as a promising way to understand the differences between levels of resource use and social outcomes observed across societies. However, the characteristics of provisioning systems remain poorly understood. Here, we make a new contribution to conceptualising provisioning systems and to understanding differences in the resource efficiency with which they achieve social outcomes. We define a provisioning system as a set of related elements that work together in the transformation of resources to satisfy a foreseen human need. We analyse six theories in terms of their contribution to understanding provisioning systems within the biophysical and social constraints of Raworth's "Safe and Just Space" framework. We find that most of these theories fail to prioritise human needs and well-being, and do not incorporate explicit environmental limits. However, they provide important insights that we draw upon to identify six important provisioning system elements (households, markets, the commons, the state, techniques, and material stocks). Based on the theories, we also identify two important relationships between elements, namely feedbacks and power relations. We further propose the concept of "appropriating systems" as a component of provisioning systems. Appropriating systems reduce the resource efficiency of human well-being via rent extraction, and act as a barrier to meeting human needs at a sustainable level of resource use. We combine these concepts into a new framework, and discuss applications to energy systems.

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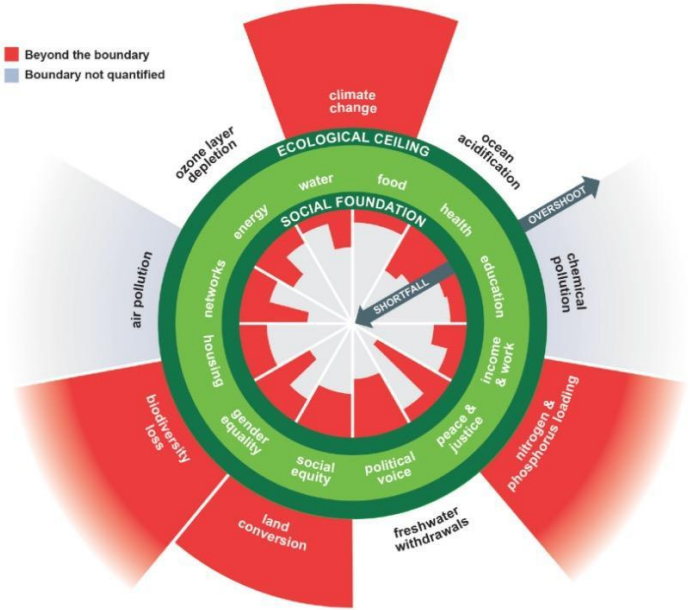
A world perilously out of balance



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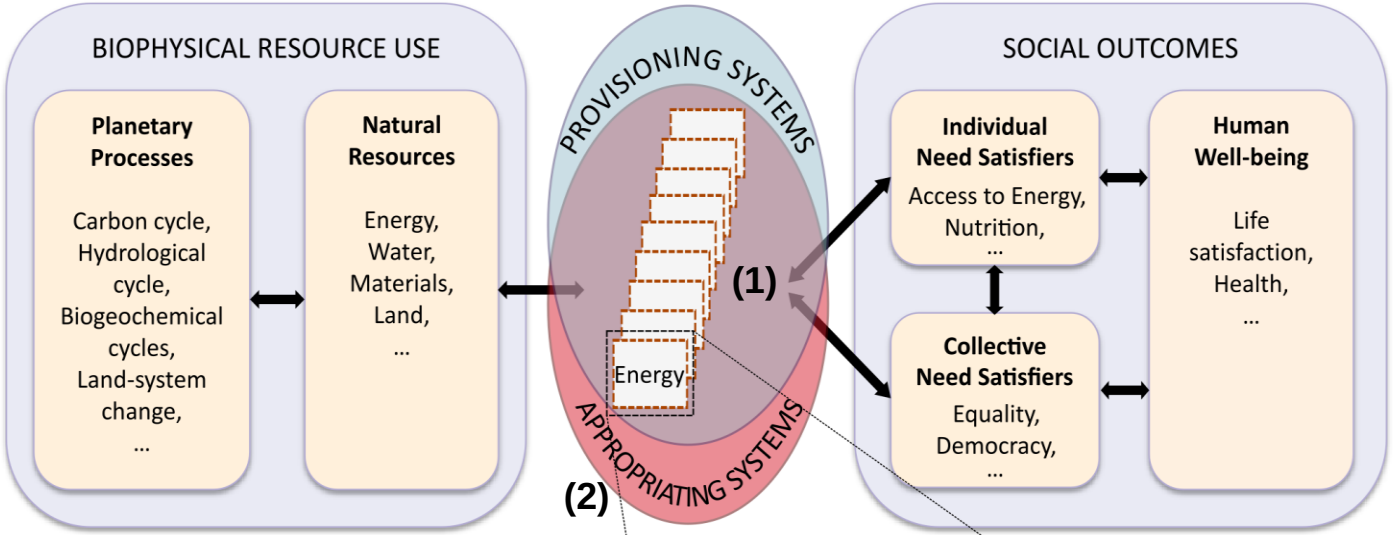
Raworth (2017)
Steffen et al (2015)

Fanning et al (2022)

Provisioning systems: an emerging concept



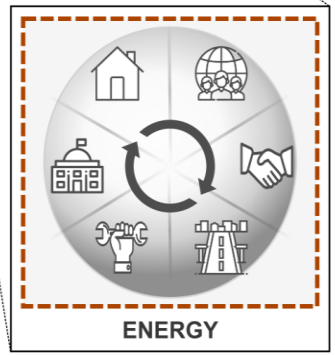
Framework based on Daly's Ends-Means spectrum

We propose three main changes:

(1) suggest that each human need can be mapped 1-to-1 to a corresponding provisioning system

(2) include an explicit focus on rent extraction via 'appropriating systems'

(3) identify provisioning elements and relationships



(3)

O'Neill et al (2018)
Fanning et al (2020)