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Special Aspects of the Management of Socio-ecological Systems (SES)

18. Interdisziplinäre Diskussion - Systeme, Prozesse, und ihre Management

Leipzig, 23.07.2021

Dr.-Ing. Sabine Lautenschläger

AGENDA

- Definition.
- Management approaches and challenges.
- Discussion.

Social-ecological systems (SES)

SES are nested, multilevel systems that provide essential services to society such as supply of food, fiber, energy, and drinking water (Berkes and Folke 1998). Other terms used to denote such systems are “socio-ecological system” (Gallopín 1991) or “human-environment system” (Turner et al. 2003a, Scholz 2011).

Source: Claudia R. Binder, Jochen Hinkel, Pieter W. G. Bots and Claudia Pahl-Wostl (2013): Comparison of Frameworks for Analyzing Social-ecological Systems. *Ecology and Society* 18(4): 26. <http://dx.doi.org/10.5751/ES-05551-180426>.

Sustainable development

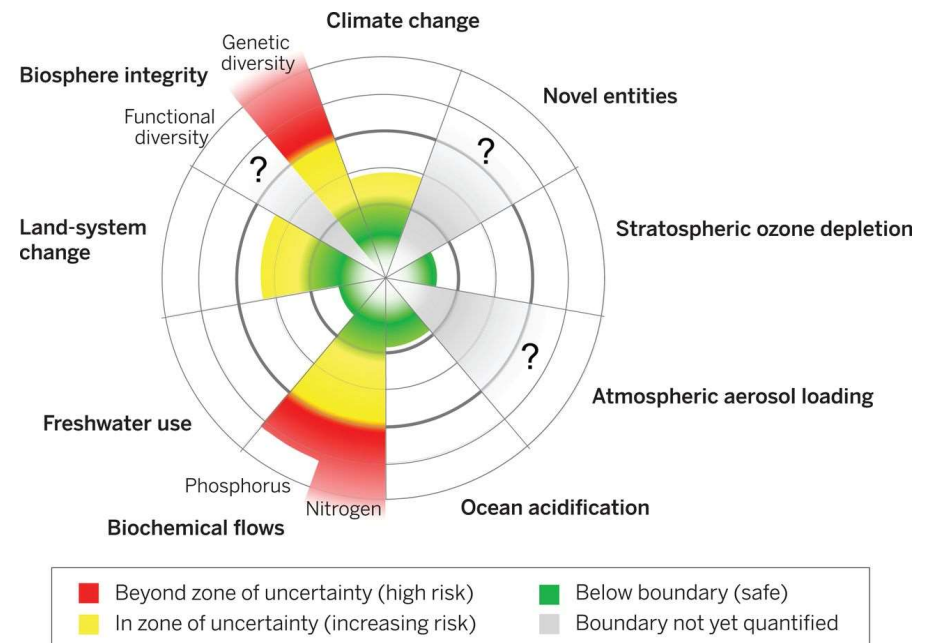
“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- The concept of 'needs', in particular, the essential needs of the world's poor, to which overriding priority should be given; and
- The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.”

(Bruntland et al. 1987)

Systemic management addressing SES and sustainability

- principles,
- (environmental) law,
- participation,
- incentives,
- (regulatory) monitoring,
- planetary boundaries,
- transparency and information,
- ...



Source: Steffen, W. et al. (2015): Planetary boundaries: Guiding human development on a changing planet. <http://dx.doi.org/10.1126/science.1259855>. See: <http://www.ecologyandsociety.org/vol14/iss2/art32/>

...multilevel nested frameworks / hierarchies

Discussion.

Thank you for listening.

Sabine Lautenschläger

Universität Leipzig

Wirtschaftswissenschaftliche Fakultät

Institut für Infrastruktur und Ressourcenmanagement

Grimmische Straße 12

04109 Leipzig

E-Mail: lautenschlaeger@wifa.uni-leipzig.de