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Environmental footprints: assessing anthropogenic effects on the planet's environment

Fang, K.

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Author: Kai Fang

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Propositions

For the doctoral thesis:

Environmental footprints: Assessing anthropogenic effects on the planet's environment

by Kai Fang

1. Environmental footprints are indicators that measure anthropogenic pressure or associated impacts placed on the environment by human actions, irrespective of their precise units and dimensions (this thesis).
2. In line with a long-time divergence encountered in the scientific literature between MFA and LCA, the inventory-oriented footprints and impact-oriented footprints offer two competing paradigms for the development of footprint indicators (this thesis).
3. Saying that footprints must be LCA-based would be, to some extent, akin to saying that footprints must be area-based—both are due to a lack of mutual understanding between different scientific communities in the field (this thesis).
4. Man should not merely minimize his environmental footprints, which many footprint users concentrate on, but make sure these footprints stay within the planetary boundaries, which is a critical prerequisite for sustainable development (this thesis).
5. In general, the worldwide unsustainability of carbon emissions is largely driven by economic development, while resource endowments play a central role in explaining national performance on water and land use (this thesis).
6. The concept of footprint family has attracted considerable interest and discussions because of its capacity to encompass a much broader spectrum of sustainability issues for policy support than single footprints (cf. Galli et al., 2012).
7. An indicator that measures what is currently happening to the environment has no relation to sustainability assessment unless it is benchmarked against a critical threshold indicator serving as a reference (cf. Lancker and Nijkamp, 2000).
8. Today's widening gaps of environmental sustainability call for a transition from focusing environmental issues in isolation to addressing them simultaneously from an integrated perspective (cf. Biermann, 2012).
9. Given the complexity and uncertainty in environmental sciences, no methods should be considered as golden standard for all cases (cf. Huijbregts et al., 2010).
10. A true scholar is someone who deserves respect, irrespective of degrees, titles, and awards.