

SESSION DESCRIPTION

ID: T3b

Ecological tipping points and societal transformation processes in social–ecological systems

Hosts:

	Title	Name	Organisation	E-mail
Host:		Sophie Peter	ISOE – Institute for Social–Ecological Research	sophie.peter@isoe.de
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Abstract:

"Ecological tipping points (TPs) can be defined as a “situation in which an ecosystem experiences a shift to a new state, with significant changes to biodiversity and the services to people it underpins, at the regional or global scale” (Secretariat of the Convention on Biological Diversity, 2020, p. 72). Natural science research on potentially interconnected TPs focuses mainly on mathematical–analytical approaches (e.g., in the climate system). In contrast, an integrative social–ecological approach can provide a holistic perspective on the nature–society interactions (Liehr, Röhrig, Mehring, & Kluge, 2017). This is demonstrated, for example, in the NamTip project focusing on possible desertification TPs in Namibia’s semi–arid grasslands (Männer et al., 2021). Another current project, MORE STEP, which focuses on societal transformation processes to foresee TPs, confirms the potential of inter– and transdisciplinary research (Mehring et al., 2018). The session focuses on exchanging conceptual approaches and results on the interlinkage of ecological TPs and societal transformation processes to develop common perspectives. The exchange aims, first, to highlight the complexity of this interlinkage, as societal transformation processes can be facilitators as well as preventers of reaching TPs. And second, to get a deeper understanding of the implications for the supply–demand relationship of ecosystem services and potential disservices.

The projects NamTip and MORE STEP are hosting the session and are part of the research programme BioTip, funded by the German Federal Ministry of Education and Research. However, the session is open to all projects with the aim to exchange research ideas, to work out possible similarities but also differences and to start developing a joint product.

Reference List

Liehr, S., Röhrig, J., Mehring, M., & Kluge, T. (2017). How the Social–Ecological Systems Concept Can Guide Transdisciplinary Research and Implementation: Addressing Water Challenges in Central Northern Namibia. *Sustainability*, 9(7), 1109.

Männer, F. A., Schwarz, L.–M., Menestrey Schwieger, D. A., Amputu, V., Bilton, M. C., Brinkmann, K., et al. (2021). An Integrated Framework to Study Ecological Tipping Points in Social–Ecological Systems (International Grassland Congress Proceedings). The XXIV International Grassland Congress/XI International Rangeland Congress. Kenya Agricultural and Livestock Research Organization, Online Conference 25.10–29.10.2021.

Mehring, M., Batbuyan, B., Bolortsetseg, S., Buuveibaatar, B., Dashpurev, T., Drees, L., et al. (2018). Mobility at risk: Sustaining the Mongolian Steppe Ecosystem – societal transformation processes. Stakeholder analysis and identification of drivers and potential solution pathways. *ISOE–Materialien Soziale Ökologie*. (52), from <http://www.isoe-publikationen.de/fileadmin/redaktion/ISOE-Reihen/msoe/msoe-52-isoe-2018.pdf>.

Secretariat of the Convention on Biological Diversity (2020). *Global Biodiversity Outlook 5*. Montreal."

Goals and objectives of the session:

The session will focus on a conceptual reflection of ecological tipping points (TPs) in terrestrial, but also aquatic–focused social–ecological systems. This shall be discussed (1) from an inter– and transdisciplinary perspective; (2) focusing on societal transformation processes (causes, but also avoidance strategies of TPs); and (3) in relation to ES supply–demand relationships and possible disservices.

Planned output / Deliverables:

Developing a joint product (e.g., opinion paper).

Session format:

World cafe

Voluntary contributions accepted:

Yes, I allow any abstract to be submitted to my session for review

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