

# Symposium Physics of Sustainability and Human-Nature Interactions (SYPS)

jointly organized by  
 the Physics of Socio-economic Systems Division (SOE),  
 the Biological Physics Division (BP),  
 the Dynamics and Statistical Physics Division (DY), and  
 the Working Group "Young DPG" (AGjDPG)

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In the presence of ongoing global changes affecting both society and environment, maintaining the proper function of these systems in the future is one of the most important contemporaneous challenges to science and politics. To achieve this goal, the sustainable management of natural, economic and human resources is a crucial requirement. Statistical physics and dynamical systems theory deliver a variety of modern approaches for empirical data analysis and modeling of natural as well as socio-economic systems. From this perspective, physics plays a key role for understanding how humans shape their environment and which actions have to be taken to avoid possibly disastrous future effects to nature and socio-economy. This symposium will highlight some ongoing challenges related to environmental, economic and social sustainability and how physics can help understanding these problems and provide possible sustainable solutions.

## Overview of Invited Talks and Sessions

(Lecture room: H 0105)

### Invited Talks

SYPS 1.1	Wed	9:30–10:00	H 0105	<b>Anticipating and avoiding tipping points</b> — •TIMOTHY M. LENTON
SYPS 1.2	Wed	10:00–10:30	H 0105	<b>Climate investment under uncertainty: the two degree target and the desire for dynamic consistency</b> — •HERMANN HELD, DELF NEUBERSCH
SYPS 1.3	Wed	10:30–11:00	H 0105	<b>What are the resources required to fulfil human needs?</b> — •JULIA STEINBERGER
SYPS 1.4	Wed	11:15–11:45	H 0105	<b>Design of Sustainable Supply Chains for Sustainable Cities</b> — •ANNA NAGURNEY
SYPS 1.5	Wed	11:45–12:15	H 0105	<b>Ecological econophysics for degrowth</b> — •SALVADOR PUEYO

### Sessions

SYPS 1.1–1.5	Wed	9:30–12:15	H 0105	<b>Physics of Sustainability and Human-Nature Interactions</b>
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