Planetary Boundaries and Resource Efficiency
A Science Policy Dialogue

The Planetary Boundaries framework does not directly address the issue of resource efficiency, but identifies nine Earth System conditions vital for sustainable development. The specific means to stay within this *safe operating space* are deliberately left open, as the intention is to provide *guardrails*, not specific pathways. But for the political realm, the question of operationalization of the Planetary Boundaries is central: how is the PB framework relevant for resource use, management and governance? What added value does the PB framework and discourse provide for achieving resource efficiency goals? In return, the PB framework can benefit from existing scientific insights on natural resource efficiency and related concrete political experiences and requirements.

This event brings together leading Planetary Boundaries and natural resource scientists and German and European policy makers. The main objective is to explore the inter-linkages between resource efficiency and the safe operating space as delineated by the Planetary Boundaries, addressing questions such as:

- How can improved resource efficiency help to stay within the safe operating space and protect the Earth's life support system, i.e. ensuring human well-being and development, while reducing pressure on natural resources and the environment (decoupling)?
- How can the Planetary Boundaries discourse, narrative and emerging scientific data on global guardrails and public goods support the resource efficiency agenda (e.g. the German resource efficiency program, the EU flagship for a resource efficient Europe), environmental goal setting ("what would INDCs beyond climate look like?) and more broadly a green economy and sustainability transitions?

In this workshop, we screen the Planetary Boundaries framework for policy relevance of its key elements, such as horizontal and vertical integration (interactions between individual boundaries, sectors, scales and regions), the precautionary principle, the underlying foundation of "reconnecting to the biosphere" and the opportunities and challenges related to the safe operating space. Which relevant insights and data have recent PB downscaling exercises to national and regional level produced? What is still missing?

In return, national and European experiences with and requirements for the Planetary Boundaries and resource efficiency frameworks will be spelled out: how can they help to bridge science and policy making towards co-production of relevant knowledge (Future Earth) and for further defining relevant Planetary Boundaries?

Throughout the event, we will match the scientific and the policy making discourses, e.g. how policy oriented resource economics perceives, interprets and critiques the Planetary Boundaries concept. We will identify additional sectors to be involved in future dialogues, for improved horizontal and vertical policy coherence and operationalization of the Planetary Boundaries. The results of the workshop will be condensed in a short paper.

Event Dates

Date: 29.02.2016
Time: 09:30 to 16:45
Venue: Steigenberger Hotel Sanssouci Potsdam, Allee nach Sanssouci 1, Potsdam
Arrival: for further information on the location and arrival see https://www.steigenberger.com/en/hotels/all-hotels/germany/potsdam/steigenberger-hotel-sanssouci/location-direction

Programme

Moderation: Wolfgang Lucht (Co-chair Earth System Analysis, PIK)
Walter Kahlenborn (Managing Director, adelphi)

Time	Topic	Responsible
from 09:30	**Registration**	
10:00	Welcome and Introduction to Earth System and Sustainability Science	Wolfgang Lucht, PIK
10:15	**Bridging Science and Policy, Section 1** Synergies and tradeoffs between Planetary Boundaries and Resource Efficiency – which insights can and should scientific research provide?	Jörg Mayer-Ries, BMUB
10:30	Interlinkages between PBs and Material Resource Efficiency – policy relevant results	Friedrich Hinterberger (SERI); Harald Sverdrup (UoIceland)
10:40	Interlinkages between PBs and Energy Efficiency – policy relevant results	Detlef van Vuuren (PBL)
10:50	Interlinkages between PBs and Land Use Efficiency – policy relevant results	Michael Obersteiner (IIASA)
11:00	***Coffee Break***	
11:30	Interlinkages between PBs and Water Use Efficiency – policy relevant results	Holger Hoff (PIK; SEI)
11:40	Interlinkages between PBs and Nitrogen Use Efficiency – policy relevant results	Wilfried Winiwarter (IIASA)
11:50	Interlinkages between PBs and Resource Efficiency, the added value of a nexus approach	Raimund Bleischwitz (UCL)

Time	Topic	Responsible
12:00	Synthesis of morning contributions	Alexander Müller
12:10	**Discussion:** Opportunities for cross-benefits of PBs and Resource Efficiency agendas	Moderation
13:00	***Lunch Break***	
14:00	**Bridging Science and Policy, Section 2** PBs and Resource Efficiency – initial responses by policy makers and users of the information, further requirements for science	Moderation
14:15	Bridging science and policy making: Political Coherence, Drivers and Barriers in Europe for a Resource Efficient Economy in the Context of the Planetary Boundaries	Paul Ekins (UCL)
14:25	PBs and Resource Efficiency – a DG Environment perspective	Bettina Kretschmer (DG Env)
14:35	The PBs and Resource Efficiency – an EEA perspective	Tobias Lung (EEA)
14:45	PBs and Resource Efficiency – an OECD Perspective	Simon Buckle (OECD)
14:55	***Coffee Break***	
15:30	**Discussion:** Political Requirements and the Science Perspective – Bridging Science and Policy	Moderation
16:15	**Synthesis on Ways Forward:** The Relationship between Planetary Boundaries and Resource Efficiency in a Green Economy and Sustainability Transition	Moderation
16:45	Farewell and End of Workshop	