



Wolfgang Lucht

**Head of Research Department 1:
Earth System Analysis**

Professor of Sustainability Science at the
Humboldt-Universität zu Berlin

Prof. Dr.

Research profile

Wolfgang Lucht is an Earth system scientist with a research focus on terrestrial biogeochemistry, the integrity of the Earth's biosphere, the consequences of climate change in the Anthropocene and the co-evolution of human thought with our planet.

Professional appointments

Since 2012	Head of Research Department 1 Earth System Analysis (RD1) at PIK
Since 2009	Full professor for Sustainability Science at the Humboldt-Universität zu Berlin
Since 1999	Senior research scientist at PIK
2008-2012	Co-Chair of RD2 Climate Impacts and Vulnerability at PIK
2005-2009	Extraordinary professor of Biosphere Dynamics at the University of Potsdam
2007-2008	Co-Chair of RD1 Earth System Analysis at PIK
1994-1998	Research scientist and research assistant professor at Boston University (USA)
1990-1993	Research scientist in the department of Extraterrestrial Physics, University of Kiel

Education

1993	PhD (<i>Dr. rer. nat.</i>) in physics at the University of Kiel
1990	Physics diploma from the University of Kiel

Top five publications

- › **Ostberg, S.,** Boysen, L. R., **Schaphoff, S., Lucht, W., Gerten, D.** (2018): The biosphere under potential Paris outcomes. *Earth's Future*, 6 (1), p. 23-39.
- › Heck, V., **Gerten, D., Lucht, W., Popp, A.** (2018): Biomass-based negative emissions difficult to reconcile with planetary boundaries. *Nature Climate Change*, 8 (2), p. 151-158.
- › Friend, A. D., **Lucht, W.,** Rademacher, T. T., (...) **Ostberg, S.,** (...) **Schaphoff, S.,** (...) **Warszawski, L.,** et al. (2014): Carbon residence time dominates uncertainty in terrestrial vegetation responses to future climate and atmospheric CO₂, *Proceedings of the National Academy of Sciences of the United States of America*, 111 (9), p. 3280-3285.

- › **Lucht, W.**, & Pachauri, R. K. (2004): The mental component of the Earth system. In: **H. J. Schellnhuber**, P. J. Crutzen, W. C. Clark, **M. Claussen**, & **H. Held** (Eds.), *Earth System Analysis for Sustainability* (pp. 341-365). The MIT Press.
- › **Lucht, W.**, Prentice, I. C., Myneni, R. B., **Sitch, S.**, (...) **Cramer, W.**, et al. (2002), Climatic control of the high-latitude vegetation greening trend and Pinatubo effect. *Science*, 296 (5573), p. 1687-1689.

H-index		Citations	
Scopus	50	Total	17,535
Google-Scholar	63	Citations/Paper	123.5

Source: Scopus 07.12.2020

Major engagements and other professional roles (selection)

- › Member of the German Federal Government's Advisory Council on the Environment (SRU, since 2016, re-appointed in 2020)
- › Member, Environmental Council of the Protestant Church of Berlin-Brandenburg (since 2016)
- › Fellow of the Earth League (since 2015)
- › Member, German Committee for Future Earth, German Research Found (DFG, 2013-2016)
- › Member of the German National Committee on Global Change Research of the DFG and the Federal Ministry for Education and Research (BMBF, 2009-2013)
- › Lead author to SRREN (2011), contributing author to AR4 (2007) and AR5 (2013), expert reviewer to AR5 (2013) and AR6 (2021) for the Intergovernmental Panel on Climate Change
- › Editor of the journal Earth System Dynamics (Copernicus/EGU)

Three recent highlights

- › Lead author of two major reports to the German Government by the government's Council on the Environment (SRU) on governing democratically within ecological limits (2019) and on achieving the Paris climate targets with a CO₂ budget (2020)
- › Two keynote lectures in Berlin and Canada celebrating the 250th anniversary of Alexander von Humboldt that outlined a Humboldtian programme for the governance of the Anthropocene
- › Coordinator of research on the ecological impacts of realistic, sustainable potentials of carbon dioxide removal maintaining planetary boundaries in the EU Horizon 2020 project NEGEM

Teaching and supervision (selection)

- › Seminars and lectures: Earth as a Complex System and Transformation: Science, Societies and Policies at the Humboldt-Universität zu Berlin (since 2009)
- › 19 PhD students (15 completed, 2 ongoing, 2 departed), 4 master students (all completed), several PostDocs, mentor of 3 habilitations (now appointed professors)

Awards (selection)

- › Junior Research Group on Biosphere Dynamics and Simulation (BMBF, 1.2 mio. €, 2001-2006)
- › Offer of a full professorship in Geoinformatics (C4) at the University of Mainz (2003, declined)