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# KlimaCampus Kolloquium

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## Managing climate by managing land

Three quarters of the ice-free land surface are under some form of land use — cleared for agriculture, grazed on, or used in forestry. Strong further changes are expected for the future, because land use has been assigned a prime role in the effort to limit global warming to 2 degrees. Recent years have seen a surge in Earth observations focused on land use effects on climate. But observations often disagree with model results, preventing trust in model projections. For example, changes in energy and water fluxes associated with a reduction in forest cover show warming in most regions in observations, but cooling in Earth system models. Further, carbon stocks and fluxes associated with historical land use change are generally larger in observations than in models. In this presentation I resolve these discrepancies, highlight the dual role of land use as adaptation and mitigation tool, and prove the need to account for land management in addition to land cover changes in climate and carbon cycle modeling.

**Julia Pongratz, from the University of Munich, is guest of Martin Claußen (MPI-M).**

**Bundesstraße 53, Room 22/23 (ground floor)**