CGB Seminar

Towards an earth system model for simulation of past, present and future climate and ecosystem change: applications and perspective

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Pangea, Geocentrum II, Sölvegatan 12, Lund

EC-Earth is a global climate and earth system model, jointly developed by a European consortium currently chaired by Sweden. It contributes to international initiatives including the Coupled Model Intercomparison Project Phase 6 (CMIP6) which will underpin the next IPCC Assessment with climate model analysis and projections.

I will present applications of EC-Earth in simulating the past climate, showing the examples from green Sahara during mid-Holocene (6 ka), Arctic amplification during Pliocene (3 ma), as well as the problems encountered in Arctic sea-ice in Last Glacier Maximum simulation (21 ka). I will then show the necessity of including the ecosystem components such as dynamical vegetation, currently being implemented in EC-Earth by Lund colleagues based on the LPJ-GUESS ecosystem model, as well as interactive dust. Future perpectives on collaboration within EC-Earth and the Earth system science community in Sweden are discussed.

All welcome!