

CESM Land Model and Biogeochemistry Working Group Meetings

20 - 22 February 2013

National Center for Atmospheric Research – Boulder, Colorado

Mesa Lab – Main Seminar Room

WEDNESDAY, 20 February – Joint Land Model and Societal Dimensions Session

- 8:30 [Brian O'Neill](#) – Intro to joint session
- 8:40 Andrew Jones – Toward a more consistent treatment of land-use change within climate assessment
- 9:00 [Prasanth Meiyappan](#) - A spatial downscaling procedure for allocating agricultural land-use change
- 9:20 [Alan Di Vittorio](#) - Understanding the influence of averaging CLM output within agro-ecological zones on GCAM land use distribution estimates in the iESM
- 9:40 [Beth Drewniak](#) - Assessing the impacts of a new planting date scheme on crop productivity and yield in CLM-Crop
- 10:30 [Erwan Monier](#) - An agriculture module for CLM
- 10:50 [Lara Kueppers](#) - Effects of dynamic crop growth and irrigation on surface energy partitioning and climate over the continental U.S. using WRF-CLM
- 11:10 [Response to SSC request](#): Plans for and process of component model development and assessment

Land Model Working Group Session

- 1:15 Dave Lawrence – Welcome and Introduction to LMWG
- 1:20 [Paul Dirmeyer](#) - Seasonal climate “forecasts” in past, present and future climate – Role of the land surface
- 1:40 [Ahmed Tawfik](#) - Evaluation of sub-daily and daily land-atmosphere coupling processes in high-resolution simulations
- 1:55 [Jiafu Mao](#) - Global simulations, evaluations and applications of CLM4 at ORNL
- 2:15 [Weichun Tao](#) - Quantifying dust emission in the Western Saudi Arabia and Red Sea Regions using micro-scale land-surface model and high-resolution land surface data
- 2:30 [Ian Baker](#) – Distributed land in the superparameterized CESM
- 3:15 [Jonathan Buzan](#) - Biases in land model, extreme precipitation, and heat stress within CESM
- 3:30 [Maoyi Huang](#) - Global testing and sensitivity analyses of VIC hydrologic parameterizations in CLM
- 3:50 Hongyi Li - Space-time variability of global streamflow simulated by a physically based routing model coupled with CLM
- 4:10 [Peter Lawrence](#) - Hydrological representation in CLM4 and the implications for land cover change studies in CESM
- 4:30 [Patrick Broxton](#) - Global 1 km soils and vegetation data sets to improve land modeling
- 4:45 [Andrew Slater](#) - An assessment of snow water equivalent from observations and CMIP5 models
- 5:00 [Peter Thornton](#) – NGEE Arctic

THURSDAY, 21 February – Joint Land Model and Biogeochemistry Session

- 8:30 [Dave Lawrence](#) – CLM and CESM updates
- 9:00 Discussion of CLM4.5 and CESM policies and requirements
- 9:20 [Dan Ward](#) - Estimates of radiative forcing from fires predicted by CLM
- 9:35 [Andrew Badger](#) - Outrageous LAI for replacement vegetation in the tropics
- 9:50 Charlie Koven - A Lagrangian view of the terrestrial carbon-climate response as a simple model for understanding ESM dynamics
- 10:45 [Bill Bauerle](#) - The implications of differences in stomatal conductance model parameters on estimates of ecosystem-atmosphere energy exchange
- 11:05 [Ned Patton](#) - Roughness sublayer turbulence in the Community Land Model
- 11:25 [Jinyun Tang](#) - The CLM4 stomatal conductance calculation revisited: the empirical Ball-Berry equation and its relationship to relative humidity and vapor pressure deficit
- 11:40 [Danica Lombardozzi](#) – The influence of chronic ozone exposure on global transpiration and gross primary productivity: implications for climate

Land Model and Biogeochemistry Working Groups joint with Uncertainty Quantification Focus Group

- 1:15 Jim Gattiker and Doug Nychka - Update on Uncertainty Quantification and Analysis Interest Group
- 1:35 [Dan Ricciuto](#) - Sensitivity of site-level CLM4 simulations to input meteorology
- 1:55 [Maoyi Huang](#) - Bayesian calibration and evaluation of transferability of hydrologic parameters in CLM
- 2:15 [Jaideep Ray](#) - Estimating Community Land Model parameters using surrogates
- 2:35 [Cosmin Safta](#) - Dimensionality reduction and global sensitivity analysis for the Community Land Model
- 3:30 [Yiqi Luo](#) - A traceability framework to facilitate model evaluation
- 3:50 [Mat Williams](#) - Simple models of the global carbon balance – A data-driven approach to compare with LSMs

Friday, February 22 – Joint Land Model and Biogeochemistry Working Groups

Soil biogeochemistry

- 8:30 [Will Wieder](#) - Global soil carbon predictions are improved by modeling microbial processes
- 8:45 [Bill Riley](#) - CLM4-BeTR, A generic biogeochemical transport and reaction module for CLM4: Model development, evaluation, and application
- 9:05 [Atul Jain](#) - Modeling the above and below ground carbon and nitrogen stocks in northern high latitude terrestrial ecosystems

Nutrient interactions

- 9:25 [Josh Fisher](#) - Nitrogen cycling in the Hadley Centre land surface model (JULES)
- 9:45 [Quinn Thomas](#) - Insights into mechanisms governing forest carbon response to nitrogen deposition: a model-data comparison using observed responses to nitrogen addition
- 10:45 [Peter Thornton](#) – CNP modeling
- 11:05 [Stuart Riddick](#) - The modeled response of terrestrial nitrogen pathways to changes in domestic livestock populations from 1850 to present using the CESM
- 11:20 [Jennifer Holm](#) - Forest mortality and disturbance in the Community Land Model (CLM)
- 11:35 [Abby Swann](#) - The impact of land use change in Amazonia on South American Climate using ED-BRAMS