**CESM Land Model Working Group Meeting**  
**Tuesday, 15 March 2011**  
**Main Seminar Room, NCAR – Boulder, Colorado**

08:00  *Coffee*

08:30  Bill Large (NCAR) – Welcome
08:35  [Dave Lawrence](mailto:Dave.Lawrence@ncar.gov) (NCAR) – Introduction and State of CLM Project
09:00  [Bob Dickinson](mailto:Bob.Dickinson@utexas.edu) (U. Texas at Austin) – Progress Installing 3D Canopy Radiation in CESM/CLM4

**Hydrology**
09:15  Sean Swenson (NCAR) – Improved Cold Region Hydrological Processes for CLM
09:35  [Maoyi Huang](mailto:maoyi.huang@ornl.gov) (PNL) – Evaluating and Improving CLM Hydrologic Processes for Integrated Earth System Modeling at Regional Scales
09:55  [Liang Yang](mailto:liang.yang@utexas.edu) (U. Texas at Austin) – Improvement of CLM4 Soil Hydrology by Introducing Micropores / Macropores to the Soil / Aquifer Coupling
10:15  [Sirein Awadalla](mailto:sirein.awadalla@mit.edu) (MIT) – Interactive Wetlands/Lakes in CLM-RTM and Impact in Nile Region

10:30  *Break*

11:00  [Gautam Bisht](mailto:gautam.bisht@ornl.gov) (ORNL) – Incorporating 3D Subsurface Hydrologic Processes: Coupling PFLOTTRAN and CLM
11:20  Anna Harper (CSU) – Can We Realistically Represent Tropical Drought Stress in Models?
11:35  [Gil Bohrer](mailto:gil.bohrer@ohiostate.edu) (Ohio State) – Assessing the Effects of Hydrodynamic Stresses on Stomatal Conductance in Forest Patches with Trees of Difference Structures, Sizes, and Species
11:50  Bill Riley (LBL) – Water Isotopes
12:05  [MinHui Lo](mailto:minhui.lo@uci.edu) (UC-Irvine) – Representation of Anthropogenic Effects in CLM: Application of GRACE
12:20  Discussion

12:30  *Lunch*

13:30  [Zack Subin](mailto:zack.subin@berkeley.edu) (UC-Berkeley) – Update on a Revised Lake Model for CLM
13:50  Koichi Sakaguchi (U. Arizona) – Recent CLM-related Progress at University of Arizona

**DGVM**
14:15  [Kendra Castillo](mailto:kendra.castillo@purdue.edu) (Purdue) – Evaluation of the New CNDV Option of the CLM: Effects of Dynamic Vegetation and Interactive Nitrogen on CLM4 Means and Variability
14:30  Eunjee Lee (MIT) – Estimating Vegetation Distribution in the 21st Century: The Role of Meteorology in Plant Migration
14:45  Xiaodong Zeng (Chinese Academy of Sciences) – Model Development and Application using CLM-DGVM
15:00  [Sam Levis](mailto:sam.levis@ncar.gov) (NCAR) – 21st Century North Africa as Simulated in the CCSM4/CESM1

15:15  *Break*

**Applications**
15:45  [Abby Swann](mailto:abby.swann@harvard.edu) (Harvard) – Mid-latitude Afforestation: Consequences for General Circulation and Tropical Precipitation
16:00  Eungul Lee (Lehigh) – Effects of N-limited Downregulated GPP on Stomatal Resistance in CLM-CN during the 21st Century (preliminary experiments)
16:15  [Erik Mason](mailto:erik.mason@lehigh.edu) (presented by Ben Felzer – Lehigh) A Comparison of Early Holocene Orbital Insolation and Present-day Greenhouse Gas Forcings and Their Influences on Alaskan Ecosystems using CESM
16:30  Jung-Eun Lee (JPL) – Toward the Attribution of Recent Decadal Precipitation Differences over Tropical South America
16:45  Discussion – CLM Development Plans

17:30  *Adjourn*
CESM Joint Land Model and Biogeochemistry Working Group Meetings
Wednesday, 16 March 2011
Main Seminar Room, NCAR – Boulder, Colorado

08:00 Coffee

08:30 Synte Peacock (NCAR) – North American Surface Climate Simulation in CCSM4 over 20th C and RCPs
08:45 Forrest Hoffman (ORNL) – The International Land Model Benchmarking Project

IAMs / Land Cover-Land Use
09:00 Bill Collins (LBL) – Adding Integrated Assessment to CESM: Progress and Prospects
09:20 Jiafu Mao (ORNL) – ORNL Progress in the Integrated Earth System Model (IESM) Project
09:35 Adam Schlosser (MIT) – Permafrost, Thermokarst Methane, Climate Policy, and Climate Feedbacks using the IGSM-CLM Framework / Climate-equilibrium Response of Land Use under Different Land-Use Policies
09:55 Peter Lawrence (NCAR) – Land Cover/Land Use Change Carbon Fluxes over 20th C and RCPs
10:15 Xiaoying Shi (presented by Jiafu Mao – ORNL) – The Impact of Climate, CO2, Nitrogen Deposition, and Land Use Change on Simulated Contemporary Global River Flow

10:30 Break

11:00 Lisa Murphy (LBL) – Expansion of Loblolly Pines for Bioenergy Feedstock in Southeastern US: Climate Model Insights
11:15 Andy Jones (LBL) – An Improved Parameterization of Biofuel Cultivation for the Community Land Model
11:30 Steve Edburg (U. Idaho) – The Impact of Bark Beetle Outbreaks on Carbon Cycling in the Western US
11:45 Brendan Rogers (UC – Irvine) – Consequences of Post-fire Succession for Carbon and Energy Fluxes in CLM
12:00 Bob Dickinson (U. Texas at Austin) – Issues Involving Leaf and Soil Carbon and Nitrogen Cycling in CLM4
12:15 David Erickson (ORNL) – Constraining Terrestrial Biosphere CO2 Exchange via Anthropogenic CO2 Emission Seasonality

12:30 Lunch

CESM Joint Land Model, Biogeochemistry, and Chemistry-Climate Working Group Meetings

The Global Methane Cycle
13:45 Peter Hess (Cornell) – Introduction to Biogeochemistry-Climate / Chemistry Joint Session
14:05 Bill Riley (LBL) – Modeling Wetland Methane Emissions
14:25 Lei Meng (presented by Peter Hess – Cornell) – Constrained Estimate of Methane Emissions
14:45 Scott Elliott (LANL) – Arctic Marine Clathrate Destabilization
15:05 Philip Cameron-Smith (LLNL) – Methane Chemistry Experiments in CESM

15:25 Break

16:00 Jean-Francois Lamarque (NCAR) – Methane Lifetime in CESM
16:20 Discussion: Future Collaboration, Methane ‘Flying leap,’ Nitrogen Cycle, Ozone

17:00 Reception
08:30  Coffee

09:00  B. Large (NCAR) – Welcome
09:05  A. Fiore (NOAA), P. Hess (Cornell), J.-F. Lamarque (NCAR) – General Introduction
09:15  R. Neale (NCAR) – CAM5 and Low Resolution CAM
09:40  J. Bacmeister (NCAR) – Middle Atmosphere CAM
10:00  J.-F. Lamarque (NCAR) – Updates to CAM-chem

10:30  Break (with LMWG, BGCWG)

11:00  S. Tilmes (NCAR) – New Datasets: GEOS5 / MERRA / HIPPO / Ozone
11:30  S. Tilmes / F. Vitt (NCAR) – Running CAM-chem
12:00  Open Discussion on Model Development

12:45  Lunch
08:30  *Coffee*

09:00  [J.-F. Lamarque](#) (NCAR) – CSL Proposal  
09:10  [S. Tilmes](#) (NCAR) – GeoMIP  
09:30  [J. English](#) (CU) – Geoengineering with CARMA  
09:50  [P. Young](#) (NOAA) – HNCO

10:10  *Break (with LMWG / BGCWG)*

10:40  [S. Elliott](#) (LANL) – Ice Algae Emissions  
11:00  [A. Fiore](#) (NOAA) – Pollution Events  
11:20  [L. Emmons](#) (NCAR) – POLMIP  
11:35  [C. Heald](#) (CSU) – National Park Project  
11:45  Discussion on Existing Projects / Computational Requests

12:30  *Lunch*

13:30  [A. Conley](#) (NCAR) – Radiative Forcings using PORT  
14:10  J.-F. Lamarque (NCAR) – Model Release  
14:30  [Doug Kinnison](#) (NCAR) – VSL Halogen Chemistry in CAM-CHEM

15:30  *Adjourn*
CESM Biogeochemistry Working Group Meeting
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08:00  Coffee

BGC Analysis and Development
08:30  Keith Lindsay (NCAR) – Coupled Carbon Simulations
08:50  Matt Long (NCAR) – Ocean Carbon Sink Dynamics in CESM1
09:10  Kazuhiro Misumi (CRIEPI/NCAR) – Does Bio-Refractory Dissolved Organic Matter Control the Global Oceanic Dissolved Iron Distribution?
09:30  Keith Moore (UC-Irvine) – BGC in x3 Ocean Model
09:50  Keith Lindsay (NCAR) – Ocean Model BGC Ongoing Developments

10:10  Break

10:50  Peter Thornton (presented by Gautam Bisht – ORNL) – Evaluating Modeled Carbon State and Flux Variables against Multiple NACP Observational Datasets
11:05  Rosie Fisher (NCAR) – Optimization-based Approaches to Simulating Canopy Leaf Area Investigated using CLM-CN
11:25  Charlie Koven (LBL) – Addition of Long-lived Soil Carbon to CLMCN
11:45  Wrap-up BGC Discussion – CMIP5, Coordinated Land / BGC Development, Validation of Carbon Model

12:30  Adjourn