

LBA-DMIP Biosphere2 Workshop Recap

Day One, April 18, 2011: Discussion of Progress Made on Proposed Papers for Special Issue of *Agricultural and Forest Meteorology*

- Critical papers
 - Overview and synthesis [Gustavo Gonçalves/Marcos Costa /Ian Baker/Jordan Borak]
 - Uncertainty analysis of fluxes [Natalia Restrepo-Coupe/Celso von Randow, plus Kevin Schaefer & Josh Fisher/Aaron Polhamus]
- Author policy:
 - Main authors + 1 author per site + 1 author per model in every manuscript
 - Include everyone and leave it up to each of them to decide whether or not they wish to be opted out of the authorship list
- Proposed schedule
 - Deadline for submission to special issue is September 1
 - The two critical papers (although not show-stoppers) need to be finished ASAP
- Presentations (*slides from all B2 presentations received will be posted to the LBA-DMIP website*)
 - Brad Christoffersen: *Data-Model Intercomparison of ET Fluxes Across Amazonia: Hydrological Mechanisms*
 - Koichi Sakaguchi: *Longwave Gap Filling*
 - Debora Roberti: *NPP, LAI and Carbon Allocation*
 - C. von Randow: *Uncertainty Analysis of Fluxes*
 - Hewlley Imbuzeiro: *Sensitivity of Model-Observation Comparisons to Filtering Strategies*
 - Marjolein de Weirdt: *State of the Art - Modeling Evergreen Tropical Forests with ORCHIDEE*
 - I. Baker: *What Drives the Seasonality of NEE?*
 - A. Polhamus: *Model Skills and Uncertainties: An Evaluation of Model Prediction Performance against Observations at Eight LBA-MIP Sites*
 - C. von Randow: *Analyses of Interannual Variability*
 - Alok Sahoo: *Sensible and Latent Heat Fluxes*
 - Michel Muza: *Relationship between Brazilian Ecosystems and Pacific/Atlantic TSM, Teleconnection Patterns*
 - M. Costa: *Land Use Change at Km77*
 - David Galbraith: *CUE Across Biomes*

- List of papers
 - Editorial summary
 - Main editorial [M. Costa]
 - Overview and synthesis [G. Gonçalves/M. Costa/I. Baker/J. Borak]
 - Conclusion/closing [M. Costa]
 - Model/data uncertainty
 - LW gap filling [N. Restrepo-Coupe]
 - Uncertainty analysis of fluxes [N. Restrepo-Coupe/C. von Randow, plus K. Schaefer & Josh Fisher/A. Polhamus]
 - Sensitivity of model-observation comparisons to filtering strategies [H. Imbuzeiro/M. Costa]
 - Model skills, model uncertainties and attributions [J. Fisher/M. Muza/I. Baker/G. Gonçalves/João Gerd]
 - Comparison of model parameterizations across sites and models [Hans Verbeeck]
 - Energy fluxes
 - Seasonality of Et fluxes across biomes [B. Christoffersen/J. Fisher/Gonzalo Miguez-Macho]
 - Sensible and latent heat fluxes [A. Sahoo, D. Roberti]
 - Radiation fluxes [Humberto da Rocha, Bruno Cestaro]
 - Carbon phenology
 - Seasonality of vegetation dynamics (GPP, LUE) [Ben Poulter]
 - CUE across biomes [D. Galbraith]
 - NPP, LAI, C allocation [D. Roberti]
 - What drives the seasonality of NEE? [I. Baker/H. da Rocha]
 - Interannual Variability [C. von Randow/Dirceu Herdies/Scott Saleska/I. Baker/M. Muza]
 - Other
 - Brazilian ecosystems at diurnal to intra-seasonal timescales [J. Gerd/M. Muza/G. Gonçalves]
 - Relationships between Brazilian ecosystems and Pacific/Atlantic TSM, teleconnection patterns [M. Muza/G. Gonçalves]
 - Land use change at Km77 [Luciana/M. Costa]

Day Two, April 19, 2011: Discussion of Phase II Regional Simulation Plans

- Scientific questions to answer while planning for Phase II
 - What are the spatial patterns of processes across the Amazon?
 - What patterns are evident with respect to climatic variability (e.g., ENSO, recent droughts)?
 - What can be said about interannual variability?
 - What other trends are seen in Amazonia (e.g., NPP)?
 - What are the effects of land use change on the carbon cycle in the Amazon?
- Technical issues to address while planning for Phase II simulations, and associated decisions made at B2 workshop
 - Time span: 2000 – 2010
 - Domain: 20S-8N; 80W-45W
 - Spatial resolution: 0.5 degree
 - Temporal resolution of output: monthly
 - Forcing data set possibilities: SALDAS, Era-Interim, MERRA, CFSR
 - Parameter maps: MsTMIP
 - Spin-up: to steady state
- Proposed schedule
 - Release forcing datasets, starting July 1
 - Submit simulations by October 1
 - Next meeting: AGU Fall 2011
 - Next workshop: March 2012 in Maceió, Brazil
- Presentations (*slides from all B2 presentations received will be posted to the LBA-DMIP website*)
 - Dirceu Herdies/J. Gerd: *Regional Datasets and Computing Capabilities at CPTEC-INPE*
 - Kazuhito Ichii: *Preliminary Analysis of Tropical Forest Carbon Cycle Seasonality (+ MIP activities from Asia)*
 - Robert Grant: *Modelling the Carbon Balance of Amazonian Rainforests: Resolving Ecological Controls on Net Ecosystem Productivity*
 - K. Schaefer: *MsTMIP and NACP Site Synthesis Analysis Projects*
 - Rafael Rosolem: *Land Surface Model Parameter Sensitivity Analysis and Estimation in the Amazon Basin*
 - I. Baker: *Regional Ecophysiology in Tropical South America*