MONDAY, 8 February

8:00 Coffee
8:30 Welcome and Introductions

**Mitigation-related talks**

8:40 Investigating climate stabilization scenarios using ESM, EMIC, and IAMs: An introduction of our activity in Program for Risk Information on Climate Change  
Kaoru Tachiiri

9:00 Can we bet on negative emissions to achieve the 2°C target even under strong carbon cycle feedbacks?  
Katsumasa Tanaka

9:20 Beyond RCPs: Mitigation options to avoid severe climate change  
Ben Sanderson

9:40 Climate outcome of combined mitigation and geoengineering scenarios between 2040 and 2200  
Simone Tilmes

10:00 Continental breakfast

10:30 A probabilistic analysis of cumulative carbon emissions and long-term planetary warming  
Jeremy Fyke

10:50 Evaluation of long-term bioenergy penetration considering uncertainties in allowable carbon emissions and technology  
Diego Silva Herran

**Methods-related talks**

11:10 The use of Community Earth System Model output in human dimensions climate work  
Emily Laidlaw

11:30 Pattern scaling: A recent development in larger plans  
Claudia Tebaldi

11:50 Bidirectional coupling of earth system models with social science models: New motivations and a proposed path  
John T. Murphy

12:10 Lunch (on your own)

**Impacts-related talks**

1:30 Update on and next steps for the Benefits of Reduced Anthropogenic Climage ChangE (BRACE) project  
Brian O’Neill

1:40 Increasing risk of record-breaking summer temperatures under global warming and the potential for mitigation  
Flavio Lehner

2:00 The potential impacts of 21st century climatic and population changes on human exposure to the virus vector mosquito Aedes aegypti  
Andy Monaghan

2:20 Consequence of climate mitigation on the risk of hunger  
Tomoko Hasegawa

2:40 Break

3:10 Collaborative research to support civil engineering  
Chris Anderson

3:30 Climate change information dashboards for water managers  
Caspar Ammann

**Computing projects**

3:30 Current projects and SDWG proposal process  
Co-chairs

4:00 Update and outlook for new computing proposals  
Jean-François Lamarque

4:10 Discussion about computing projects

4:30 Working group business / wrap-up discussions

5:00 Adjourn
TUESDAY, 9 February

**Joint Land Model, Biogeochemistry, and Societal Dimensions Working Groups**

8:00 Coffee
8:30 Welcome and Introduction

*Crops, wood harvest, and land use*

8:35 Using the CLM Crop Model to assess the impacts of changes in climate, atmospheric CO2, irrigation, fertilizer, and geographic distribution on historical and future crop yields
8:50 Simulating the United States county level crop yields in Community Land Model with an optimized fertilizer scheme
9:05 Winter wheat in CLM4.5
9:20 Modeling the interaction between climate and timber harvest: A fully coupled approach
9:35 Deforestation and peatland fires in Rupat Island

9:50 Discussion
10:00 Continental Breakfast
10:30 Evaluating the need for integrated land use and land cover analysis for robust assessment of climate adaptation and mitigation strategies
10:45 Threshold behavior in surface response to afforestation

11:00 Discussion

**CESM1.2**

11:10 Results from CESM1.2 BGC simulations
11:30 Discussion
11:45 Lunch (on your own)

**CLM5 Description and Assessment**

1:00 State of CLM
1:20 Hydrology
1:35 Validating MOSART in CLM5 Beta in comparison with ACME-MOSART
1:50 Snow metric and snow analysis
2:05 Climate simulations with respect to land cover change in CLM45 and CLM50
2:20 Revisions to land cover dataset
2:30 Discussion
2:50 Break
3:20 FACE, ED update
3:40 Nitrogen
4:00 Soil Carbon
4:15 PFT-level analysis and crop model assessment
4:30 Dynamic root impacts on productivity and evapotranspiration
4:45 Plant hydraulics

5:00 Discussion
5:30 Adjourn
**WEDNESDAY, 10 February**

8:00  *Coffee*

**Joint Land Model and Biogeochemistry Working Groups**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Multi-layer canopy</td>
<td>Gordon Bonan</td>
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<tr>
<td>8:45</td>
<td>Hillslope hydrology</td>
<td>Justin Perket</td>
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<td>9:00</td>
<td>Representing lateral groundwater flow dynamics improves hydrologic and carbon cycle simulations in an Amazonian basin: Application with PAWS+CLM</td>
<td>Bill Riley</td>
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<td>9:15</td>
<td>Using reactive transport codes to provide mechanistic biogeochemistry representations in global land surface models: Progress and challenges with CLM-PFLTRAN 1.0</td>
<td>Richard Mills</td>
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<td>9:30</td>
<td>Soil nutrient competition: Theories, observations, and implementation in earth system land model</td>
<td>Qing Zhu</td>
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<td>9:45</td>
<td>Improvements and scientific validation of CLM in the framework of the Terrestrial Systems Modeling Platform (TerrSysMP)</td>
<td>Prabhakar Shrestha</td>
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<td>10:00</td>
<td><em>Continental Breakfast</em></td>
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**Applications**

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<tr>
<td>10:30</td>
<td>The impact of SO2 emissions reductions on US carbon uptake</td>
<td>Gretchen Keppel-Aleks</td>
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<td>10:45</td>
<td>An observational constraint on stomatal function in forests: Evaluating coupled carbon and water vapor exchange with carbon isotopes in CLM 4.5</td>
<td>Brett Raczka</td>
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<td>11:00</td>
<td>Climate impacts of plant structural acclimation in response to climate change</td>
<td>Marlies Kovenock</td>
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<td>11:15</td>
<td>Extending assessment of climate teleconnections to account for diverse ecological responses</td>
<td>Elizabeth Garcia</td>
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<td>11:30</td>
<td>Using ARM observations to evaluate land-atmosphere coupling in CAM5.1/CLM4 hindcasts on the U. S. Southern Great Plains</td>
<td>Tom Phillips</td>
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<td>11:45</td>
<td>Atmosphere-land surface coupling diagnostics for CESM and CMIP5 models</td>
<td>James Randerson</td>
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<td>12:00</td>
<td><em>Adjourn and lunch (on your own)</em></td>
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