

Mid Continent Intensive Workshop: Synthesis of Inversion and Inventory Data for 2007

June 17-19, 2009

Natural and Environmental Sciences Building, Room A302,
Colorado State University, Fort Collins, CO

Host: Stephen Ogle (phone: 970-491-7662, email: ogle@nrel.colostate.edu)

Objective: The Mid-Continent Intensive is a regional scale study intended to improve estimation CO₂ fluxes at larger scales, and advance our understanding of the mechanisms driving the patterns. A major milestone in this effort is to compile and reconcile estimates from inversions and inventories based on 2007 data, and this workshop will review progress, discuss issues and solutions, and develop a coordination plan for meeting the goal

Schedule:

Wednesday June 17

Review of Progress Towards Compilation of 2007 Inversions and Inventory

- 8:30-8:50 Introductions and overview of workshop goals
- 8:50-9:15 Atmospheric Data Stream – Ken Davis (Pennsylvania State University)
- 9:15-9:45 First Attempt at High Resolution Inversions for MCI – Andrew Schuh (Colorado State University)
- 9:45-10:05 Plans for Carbontracker Inversions for MCI Study – Arlyn Andrews (NOAA-Boulder)
- 10:05-10:25 Break (Coffee, Tea and Snack)
- 10:25-11:00 Diversity of Contributions for Estimating CO₂ for Cropland systems
ORNL-West Method – Tris West (ORNL-DOE)
GEMS – Shuguang Liu (USGS-EROS)
- 11:00-11:20 Forest Carbon Inventory – Linda Heath (USDA-Forest Service)
- 11:20-11:40 Fossil Fuel Emissions Inventory for MCI- Yuyu Zhou (Purdue University)
- 11:40-12:00 Combining Data Contributions to make the MCI Inventory, Approach and Uncertainty – Stephen Ogle (Colorado State University)
- 12:00-1:30 Lunch

Break-Out Groups: Data Streams, Modeling Issues, and Solutions

- 1:30-1:50 Questions from Morning Sessions and Charge to Break-Outs

Concurrent Break-Outs

2:00-5:00 BOG I: Atmospheric Data Streams and Inversions (Rm. B215)
Moderator: Arlyn Andrews
Discussion Topics:
What is each group bringing to the analysis?
Space and time scales for inversion results
Uncertainty including Interpolating variance/covariance for coarse area models
Format of output (Andy's output suggestion format for Interim Synthesis?)
Useful ancillary data (info like priors?)
Transport? (what to use, what is available?)
Sensitivity of inversions (additional variance?)
Comparability to inventory (what fluxes are being estimated)
Any missing components?
Coordination and providing solutions in a timely manner
Possible and useful to combine inversions into a single product, similar to the inventory
Uncertainty

2:00-5:00 BOG II: Inventory (Rm. A302)
Moderator: Stephen Ogle
Discussion Topics:
What is each group bringing to the analysis?
Complementarity of Inventory Approaches
Estimates of Crop and Forest NPP
Model Input Data
Spatial and Temporal Scale
Uncertainty
Flux Site Comparisons
Combining Estimates – Source Categories
Missing Sources or Components for the Analysis
Format of Output
Coordination and providing results in a timely manner

Thursday, June 18

8:30-9:30 Report from BOG and Discussion

Comparing and Reconciling Inventory and Inversion Results

9:30-10:00 Comparing Inventories and Inversions – Dan Cooley (Colorado State University)

10:00-10:25 Break (Coffee, Tea and Snack)

10:25-11:10 Reconciling Inversion and Inventory Estimates – F. Jay Breidt (Colorado State University)

11:10-12:00 Open Discussion about Methods for Comparisons and Reconciliation

12:00-1:30 Lunch

Break-Out Groups: Comparisons and Reconciliation

1:30-5:00 BOG I: Comparisons and Reconciliation (Rm. A302)
Moderator: Dan Cooley
Discussion Topics:
Scale of Comparisons
Analysis of Differences between Inversions and Inventories
State-Space Model
Mechanistic Understanding

1:30-5:00 BOG II: Inversions (Rm. B215)
Continued from first day

1:30-5:00 BOG III: Inventory (Rm. A304)
Continued from first day

Friday, June 18

8:30-10:00 Report from BOGs and Discussion

10:00-10:25 Break

10:25-12:00 Time Lines, Milestones and Coordination