

Workshop #3: Modeling to Support Policy

Organized by USEPA, USDA-Forest Service, and Agriculture and Agri-Food Canada

October 12-15, 2004, Shepherdstown, WV, National Conservation Training Center

Workshop Rationale: A variety of policies and programs are being developed to satisfy domestic or international initiatives to reduce national GHG emissions. U.S. activities include state and private-sector greenhouse gas registry programs, and the Administration's current revisions of the rules for the 1605(b) registry program. The Canadian government is engaged in developing an emissions offset credit system, including sinks, to help meet its international GHG commitments.

The workshop has three objectives: 1) identify the policy community's needs and priorities for assistance from modelers in improving our understanding of the benefits, co-effects, and costs of mitigation options; 2) help improve the representation of implementation issues like baseline setting, transaction costs, aggregation across small parcels, leakage, and links with conservation programs, in national sectoral and integrated assessment models; and 3) develop a working agenda of key potential next steps in realizing objective 1 and 2.

Arrival: Tuesday, October 12th

5:00-6:30 pm Registration; 6:30 - 8:00 pm Dinner & Reception

Informal discussions afterwards

Day 1: Wednesday, October 13th

6:30 - 8:00 *Breakfast: Main Dining Room*

8:00 am **Welcome and Workshop Overview**

- Organizers: Ken Andrasko and Steve Rose, USEPA; Ralph Alig, USDA/USFS; Jan Lewandrowski, USDA/Global Change Office; Robert MacGregor, Agriculture and Agri-Food Canada
- Dina Kruger, USEPA; Bryce Stokes, USDA-USFS; & Robert MacGregor, Agriculture and Agri-Food Canada

8:30 **Stage-Setting Keynote Address**

Introduction and discussion leader: Francisco de la Chesnaye, USEPA

- John Reilly, MIT: "Modeling to Inform Climate Policy"
Objective: big-picture opening reviewing when modeling has been influential, when it hasn't, and how smaller-scale models can contribute to the evolution of climate economic and integrated assessment models

9:00 Group Discussion

9:15 **Policy Landscape: Program Status and Modeling Needs**

Discussant and discussion leader: Neil Sampson, Sampson and Associates

Objective: Policymakers are considering a variety of approaches and programs. Speakers briefly (20 min.) review program status (activities covered, incentives, reporting requirements), then perform gap analysis to identify priority modeling and information needs for programs, including addressing key implementation issues listed below (baselines, etc.).

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- Peter Graham, Canadian Forest Service, "Implementation Issues for Developing an Offsets

Trading Market for Agriculture and Forestry: Linkage to a Canadian Domestic Emission Trading System"

- Bill Hohenstein, USDA/Global Change Office: "DOE's 1605(b) Registry (Forest and Agriculture), and USDA Conservation Security Act "

10:00 *Coffee Break*

10:20 **Policy Landscape (continued)**

- Michelle Passero, The Pacific Forest Trust, and Mike McCormick, California Climate Action Registry, "The California Climate Action Registry's Forest Protocols: Overview and Use of Models "
- Uwe Schneider, Hamburg University, "Modeling Potential Agricultural and Forestry Participation in the EU Emissions Trading System"
- Magda Aparecida de Lima, EMBRAPA, Brazil, "Forest and Agriculture Climate Policy Issues in Brazil"
- Dimitri Zamalodchikov, IFI, Russia, "Land-use Baseline and Mitigation Potential of Russian Forests"
- Jeff Fiedler, Natural Resources Defense Council, "WRI/WBCSD GHG Protocol: Project Module"

11:40 Discussant and discussion

12:15 pm *Lunch: Main Dining Room*

1:15 Katie Bickel, USDA/GCPO: "New Disaggregated GHG Inventory Data for Agriculture and Forestry"

1:35 **Modeling Landscape: Progress on Key Implementation Issues**

[30 minute talks: 20 min. presentation + 10 min. discussion]

Discussant and discussion leader: Ken Andrasko, USEPA

Panel 1. Use of models for helping determine offset project and program design:

- Sandra Brown, Winrock International, "Estimating the carbon supply for afforestation: Agricultural lands in the Mississippi Valley and grazing lands in California"
- Brian Murray, RTI International, "Addressing Permanence and Leakage of GHG Benefits from Forest and Agricultural Projects"

2:40 *Coffee break*

3:00 **Modeling Landscape (continued)**

Panel 2. Transaction costs and Scaling Issues

- Jayant Sathaye, Lawrence Berkeley National Laboratory, "Estimates of Transaction Costs in Forestry Projects"
- Sian Mooney, University of Wyoming, "Scaling Model Results from Field to Region: Review of Models Addressing Payment Approaches for Cropland Sequestration and Measurement Costs"

4:00 Discussant and discussion

4:30 **Keynote Synthesis of Policy and Modeling Landscapes**

Introduction and discussion leader: Steve Rose, USEPA

- Ken Richards, Indiana University, "Sequestration: What Elements Are Needed to Implement It, and Are They in Place?"

5:00 Group Discussion

5:20 pm **Day 1 Conclusion**

6:00 *Dinner: Main Dining Room*

7:30 *Informal Coffee and Dessert in the Roosevelt Room – no program*
Informal discussions afterwards

Day 2: Thursday, October 14th

6:30 - 8:30 *Breakfast: Main Dining Room*

8:00 am **Case Studies: How Can We Vertically Integrate Biophysical, Economic, and Policy Analyses into Credible Mitigation Programs**

Introduction: Steve Rose, USEPA, and Bob MacGregor, Agriculture and Agri-Food Canada

Charge to presenters by organizers. Speakers discuss what we know, and need to know, for implementation of the primary option (and possible alternative practices) in your region: what practices seem promising, GHG effects, measurement and monitoring issues, economics, aggregation and contractual issues, and landowner perspectives. Seek to present a vision of how mitigation might work in this practice and region, and what modeling can contribute to what we don't yet know.

[case study presentations: 25 min., inc. brief discussion]

8:10 **Panel on Case 1. Canadian Prairies: Soil Carbon Management**

Session coordinator and discussant: Suren Kulshrestha, University of Saskatchewan

Biophysical Opportunities in Region:

- Marie Boehm, Agriculture and Agri-Food Canada, "Carbon management on the Canadian prairies - biophysical information"

Economics and Policy Issues:

- Robert Flick, Agriculture and Agri-Food Canada, "Canadian Prairie Soils and Other Mitigation Opportunities, and Program and Project Costs"
- Dan McKenney, Canadian Forest Service, "Development of a national spatial cost-benefit information system to assess afforestation potential in Canada: Some results from the Prairie region"

Implementation Experience:

- Blair McClinton, Saskatchewan Soil Conservation Association, "Engaging the Ag Sector on Climate Change Policy: Soil Carbon"

9:35 *Coffee break*

9:50 **Case 1 (continued)**

Discussant and discussion on Case 1

10:20 **Panel on Case 2: Corn Belt Soil Carbon and Other Options**

Session coordinator and discussant: Chuck Rice, Kansas State University & CASMGS Executive Committee

Biophysical Opportunities in Region:

- Joel Brown, USDA/NRCS, "Baseline and Uncertainty Methods for Cropland Sequestration Analysis and the 1605b Program"
- Tris West, Oak Ridge National Laboratory, "Permanence, and Soil Equilibria: Results, Methods, and Uncertainty"

Economics and Policy Issues:

- Catherine Kling and Lyubov Kurkalova, Iowa State University, "Analysis of Upper Mississippi River Conservation Tillage and Set-Aside Opportunities"

Implementation Experience:

- Gordon Smith, Environmental Resources Trust, "Implementing Corn Belt Soil Carbon Projects"

12:00 pm *Lunch: Main Dining Room*

1:00 **Case 2 (continued)**

Discussant and discussion on Case 2

1:30 **Panel on Case 3: Mississippi Alluvial Valley (MAV) Afforestation and Other Options**
Session coordinator and discussant: Ralph Alig, USDA/USFS

Biophysical Opportunities in Region:

- Jim Smith, USDA/USFS: "Inventory Approaches to Forest Baselines and Mitigation: Forest Baseline and GHG Benefit Estimator"

Economics and Policy Issues:

- Brent Sohngen, Ohio State University, "Improving Representation of Forest Mitigation in National Models: How Detailed Do We Need to Be? Case of MAV"

Implementation Experience:

- Randy Williams, Field to Forest, Mississippi, "Project Development Issues and Solutions for Regeneration of Bottomland Hardwoods"
- Sandra Brown, Winrock International, "Modeling and Implementation Experience and Issues in MAV Restoration"

3:15 *Coffee Break*

3:35 **Case 3 (continued)**

Discussant and discussion on Case 3

4:05 ***Synthesis of Case Studies: Lessons Learned on What is Required to Develop Market-Based Programs***

Discussant and discussion leader: Paul Thomassin, Greenhouse Gas Management Canada/McGill University

[20 min. presentations + 5 min. discussion]

- Galo Acosta, AgCert International, "Private Sector Requirements for Ag Mitigation Investments and Aggregation: How Modeling Could Help"
- Bruce McCarl, Texas A&M University, "Modeling Regional Mitigation and Implementation Issues in National Models"
- Peter Graham, Canadian Forest Service, "A Canadian Domestic Emissions Trading System: Status of Policy Development"
- Eric Vance, NCASI, "Commercial Forestry Perspective"

5:15 Discussant and discussion: Case study wrap-up and potential next steps

5:45 pm **Day 2 Conclusion**

6:00 *Dinner: Main Dining Room*

7:00 *Coffee and Dessert in the Roosevelt Room (no program).*
Informal discussions afterwards

Day 3: Friday, October 15th

6:30 - 8:00 *Breakfast*

8:00 am **Next Steps for Improving Modeling: Priorities and Feasibility**

Panel and Discussion leader: Michelle Manion, Union of Concerned Scientists

Objective: Speakers review emerging next steps, potentially: 1) model project-level mitigation, 2) model sectoral or regional (non-comprehensive) coverage programs, 3) overlay climate change impacts, adaptation, and mitigation analyses, and 4) quantify co-effects; others.

Objective: Develop short set of potential next steps, and priorities, for this modeling community.

[25 min. presentation + 5 min. discussion]

- Linda Joyce, USDA/USFS: "Overlaying Climate Impacts and Mitigation Analysis: Status and Next Steps"
- Susan Wood, BIOCAP Canada Foundation, "The BIOCAP Model: building a "network of networks" to develop biosphere solutions to climate change"
- Martin Ross, RTI International, "Modeling Regional Mitigation by Linking Detailed Sectoral Models in a CGE Framework: What Level of Detail is Needed and Possible?"

9:45 *Coffee Break*

10:05 **Group Discussion: Draft Modeling Priorities Agenda, Potential Next Steps for Modeling in Support of Policy, and Advancing Case Study Approach**

Discussants and discussion leaders: Keith Paustian, NREL/Colorado State University, and Ian Noble, World Bank Carbon Finance and Australian National University

Objective: Develop list of key next steps and priorities for model development and policy support on Forest/Ag/bioenergy mitigation options, broader climate issues and science trends, and implementation/mitigation issues.

12:00 pm **WORKSHOP REVIEW & CONCLUSION: ORGANIZERS + ATTENDEES**

- Potential activities for this Forum, e.g., policy briefing in Washington, pursue case studies, cooperation on modeling or issue analysis?
- Plans for next Workshop or activities

12:30 *Lunch: Main Dining Room*

1:30 First shuttle departs to Dulles Airport, or meet with colleagues

4:30 Second shuttle departs to Dulles Airport
