Forestry and Agriculture Greenhouse Gas Modeling Forum

September 4-7, 2018

National Conservation Training Center

Shepherdstown, WV

Sponsored by: US Environmental Protection Agency, US Department of Agriculture, Agriculture and Agri-Food Canada, Natural Resources Canada, National Institute of Ecology and Climate Change (Mexico)

Co-hosted by: RTI International, NC State University, University of Idaho

FORUM AGENDA

Tuesday, September 4, 2018

3:00–5:30 pm	Registration | *Entry Auditorium Building*
5:30–7:30 pm	Dinner | *Main Dining Room*
8:00 pm	Informal Discussions | *Roosevelt Room*

Day 1: Wednesday, September 5, 2018

6:30–8:00 am	Breakfast | *Main Dining Room*
7:00–8:00 am	Registration | *Meeting Room (151 Instructional West Building)*
8:00 am	**Welcome and Workshop Overview** Organizing Committee Members
8:15–11:45 am	**Session 1: Climate and Energy – Policy and Modeling Perspectives**
	Objective: This session brings together diverse perspectives on the current policy environment, important trends, and the latest advances in forestry and agriculture modeling. Research application presentations will illustrate recent uses of forest and agriculture models to answer policy-relevant research questions. Session Chairs: Jan Lewandrowski (USDA), Robert Beach (RTI International), Li Xue (Agriculture and Agri-Food Canada), Christopher Galik (NC State University) **Barriers to implementing modeling frameworks in Latin America for GHG emissions accounting** Craig Wayson • U.S. Forest Service **The evolution of sinks policy: where we've been and where we're going** Robert Bonnie • Duke University

(Break mid-session)	**U.S. bioenergy policy** Allen Fawcett • U.S. Environmental Protection Agency **Assessing the market potential of wood pellets** Karen Abt • U.S. Forest Service **Research and modeling for the Clean Fuel Standard policy development in Canada** Matthew Lewis • Environment and Climate Change Canada **Implications of the Canada Clean Fuel Standard for the agriculture sector** Patrick Verreault • Agriculture and Agri-Food Canada **Asymmetric mitigation price incentives in agriculture and forestry: implications for regional land management change and global emissions reduction** Justin Baker • RTI International **Efficiency, complementarity, and other policy considerations for forest sector GHG abatement** Brent Sohngen • The Ohio State University
11:45 am	Lunch | *Dining Room*
12:45-2:30 pm	**Session 2: Translating Research into On-the-Ground Policy Implementation**
	Objective: Modeling results often indicate potentially desirable outcomes, but how do we get there from here? Speakers will discuss how forest and agricultural modeling findings are being converted to on-the-ground, implementable policy, and how results are being used in policy development and implementation. Session Chairs: Li Xue (Agriculture and Agri-Food Canada), Tony Lemprière (Natural Resources Canada), Sara Ohrel (EPA) **USDA Climate Hubs – Moving science into practice** Dan Lawson • U.S. Department of Agriculture **Translating national forest service goals to local level land management: Carbon sequestration** Steve McNulty • U.S. Forest Service **Applied research supporting Canadian policies for climate change mitigation involving forests** Carolyn Smyth • Natural Resources Canada
2:30–3:00 pm	Break
3:00–5:00 pm	**Session 2: Translating Research into On-the-Ground Policy Implementation (Continued)**
	The design and implementation of the Climate Leadership Plan in Alberta (Remote Presentation) Tom Goddard • Alberta Department of Agriculture and Forestry **Implementation of the British Columbia (BC) Forest Carbon Initiative: Translating research into policy and practice** Dennis Paradine and Caren Dymond • British Columbia Department of Forests, Lands, Natural Resource Operations, & Rural Development

	Assessing the landscape GHG emission reduction potential of different California land management suites using an empirical model Alan Di Vittorio • Lawrence Berkeley National Laboratory **Applied bioenergy modeling: a lesson in uncertainty** Christopher Galik • NC State University
5:30-7:30 pm	Dinner | *Dining Room*

Day 2: Thursday, September 6, 2018

6:30–8:00 am	Breakfast | *Dining Room*
8:00–9:30 am	**Session 3: Modeling Toolkits and Frameworks**
	Objective: Forest and agricultural models are under continuous development to support longer-term scenario analysis and to assess the potential effects of changes in biophysical systems, socioeconomic trends, technologies, and policies. This session discusses the tools needed for assessments of land sector greenhouse gas emissions and removals and examines how we can enhance the integration of tools and datasets. Session Chairs: Shaun Ragnauth (EPA), Carolyn Smyth (Natural Resources Canada) **Applying a systems approach to assess carbon emission reductions from climate change mitigation in Mexico's forest sector** Marcela Olguín and Craig Wayson • Commission for Environmental Cooperation (Mexico) and U.S. Forest Service **A systems approach to assess climate change mitigation options in landscapes of the United States forest sector** Alexa Dugan and Richard Birdsey • U.S. Forest Service and Woods Hole Research Center **Retrospectively quantifying the C dynamics of forest stands using tree-ring approaches: how past activities can be used to evaluate future mitigation potential** Juha Metsaranta • Natural Resources Canada
9:30–9:45 am	Break
9:45–12:15 pm	**Session 3: Modeling Toolkits and Frameworks (Continued)**
	Shared Socioeconomic Pathway narrative development for the global forest sector Adam Daigneault • University of Maine **Projecting U.S. forest and agricultural land management across Shared Socioeconomic Pathways** Jason Jones • RTI International **Spatially explicit downscaling of land use projections to evaluate localized forest mitigation opportunities** Greg Latta • University of Idaho **The influence of parametric uncertainty on projections of forest land use, carbon, and markets** Michael Shell • U.S. Environmental Protection Agency

	A multi-model analysis of GHG mitigation potential from U.S. agriculture and forestry Shaun Ragnauth and Sara Ohrel • U.S. Environmental Protection Agency
12:15 pm	Lunch | *Dining Room*
1:15–2:45 pm	**Session 4: Developing Markets**
	Objective: This panel session will focus on the types of greenhouse gas reduction opportunities that exist for forestry and agriculture stakeholders, the barriers to getting markets for those opportunities off the ground, and how the modeling community can best represent the evolution of these markets in their analyses. Session Chairs: Jan Lewandrowski (USDA), Christopher Galik (NC State University) **Making sense of greenhouse gas markets and other market-based opportunities for carbon sequestration in forestry and agriculture** Bill Hohenstein • U.S. Department of Agriculture **Bridging land management, climate action, and funding: lessons learned in California** John Nickerson and Alexandra Leumer • Climate Action Reserve and the Nature Conservancy **The burden of proof: quantifying the environmental outcomes of on-farm nutrient management** Kraig Westerbeek and Allison Eagle • Smithfield and Environmental Defense Fund
2:45–3:15 pm	Break
3:15–5:15 pm	**Session 5: Adaptation and Resilience - Responding to Impacts from Changing Conditions**
	Objective: Long-range assessments continue to indicate the need for developing adaptation strategies and building resilience to changing conditions. This session will focus on the modeling of impacts on the forestry and agriculture sectors, bringing together both biophysical and economic modelers to characterize and evaluate the state of climate impacts and adaptation modeling. Session Chairs: Shaun Ragnauth (EPA), Robert Beach (RTI International), Ron Sands (USDA ERS) **GLOBIOM climate impact analysis** Petr Havlik • International Institute for Applied Systems Analysis **Key USDA Hub findings on working land adaptation presented in the special issue of the journal Climatic Change** Steve McNulty • U.S. Department of Agriculture **The impact of climate change on farmers' participation in crop insurance in Canada** Jun Zhao • Agriculture and Agri-Food Canada **Implications of conservation practice persistence on carbon soil offsets** Steve Wallander • U.S. Department of Agriculture
5:30-7:30 pm	Dinner | *Dining Room*

Day 3: Friday, September 7, 2018	
6:30–8:00 am	Breakfast | *Dining Room*
8:00–10:00 am	**Session 6: Pathways to Net Zero and Net Negative Emissions**
	Objective: Modeling analyses suggest that global long-term net zero or even net negative greenhouse gas emissions will be needed to limit climate change. What role can forests and agricultural lands play? This session will examine modeling of long-term pathways in which forests and agriculture contribute to sequestration and mechanisms for limiting emissions. Session Chairs: Ron Sands (USDA ERS), Tony Lemprière (Natural Resources Canada), Carolyn Smyth (Natural Resources Canada) **Challenges for modeling net-zero carbon emissions** Ron Sands • U.S. Department of Agriculture **The role of land-based mitigation in the pathways to net zero: an integrated assessment modeling perspective** Petr Havlik • International Institute for Applied Systems Analysis **Negative emissions and the role of landscapes: feasibility and constraints to gigaton-scale sequestration** Emily McGlynn • University of California – Davis **Forests for climate mitigation: carbon sequestration, woody biomass and albedo** Alice Favero • Georgia Tech
10:00–10:30 am	Break
10:30–11:45 am	**Session 7: Taking Stock/Overarching Themes**
	Recap of Sessions Session Chairs **Workshop Review and Overarching Themes** Peter Graham • Climate Advisers
11:45–12:00 pm	**Workshop Wrap-Up**
	Closing thoughts • Organizing Committee Members
12:00 pm	**CHECK OUT TIME. We suggest checking out prior to the end of the Forum to ensure you have enough time to complete the process. You may store your bags with the hotel for the remainder of your time on campus.**
12:00 pm	Lunch | *Dining Room*
1:00 pm	Shuttle departs for Dulles Airport