

LAND-USE CHANGE & BIOENERGY Workshop

May 12-14, 2009

Tellico West Conference Center

Vonore, Tennessee

(May 8, 2009 revision)

Workshop Desired Outcomes

Through participation and discovery, the workshop organizers have developed an ambitious set of outcomes.

1. Define key requirements, characteristics, and mechanisms for more effective modeling of the interactions among energy, agriculture, land use, and economics at regional, national and global scales.
2. Develop a strategy to improve modeling tools for understanding the energy/agriculture/land-use nexus and for enabling simulations of the interaction between bioenergy choices and land-use changes.
3. Specify process and structure that would lead to the development of a benchmark data set that could be used for determining bioenergy land-use impacts.
4. Identify the level of certainty associated with data and modeling outputs currently used to support policy decisions and prioritize steps that can be taken in near and medium term to begin to reduce uncertainty levels.
5. Identify and prioritize opportunities to improve the quality and consistency of research and monitoring of the land-use impacts of bioenergy programs and policies, such as:
 - a. opportunities where collaboration can improve the capacity to measure and analyze land-use and land-cover changes around the world;
 - b. opportunities to compare and link data sets and models to increase understanding of the driving forces behind those changes relative to bioenergy decisions.
6. Develop plans for enhanced information sharing, networking, and collaboration to embrace the opportunities identified and to provide more reliable information to support decisions and policies related to bioenergy.
7. Recommend “best practices” for presenting land-use change research and modeling results that enhance transparency regarding assumptions, data sources, uncertainty and limitations.
8. Develop strategic research plan for DOE/OBP (and DOE Labs) to fill key gaps and develop improved science-based approaches for measuring the impacts of U.S. biofuel policies and programs on land use and related emissions.

Day 1: Monday, May 11 – Arrival and Registration

1:00 PM Optional field trip to Fort Loudon State Historic Park (<http://fortloudoun.com/>) [Meet at hotel lobby]

7:30 PM Welcome reception at Conference Center

Day 2: Tuesday, May 12 – Setting the Stage and Prioritizing Issues

8:00 Registration and continental breakfast

8:30 Introduction

- Welcome to Tennessee – Gary Jacobs, Biology and Environmental Sciences Directorate, Oak Ridge National Laboratory (ORNL)

- Welcome to workshop – Zia Haq, Office of the Biomass Program, US Department of Energy
 - Workshop objectives and background – Virginia Dale Center for Bioenergy Sustainability, ORNL, on behalf of Organizing Committee
 - Agenda and workshop approach – Gary Forbes, Workshop Facilitator
 - Participant introductions (brief)
- 9:15 Plenary: Key issues for estimating land-use change effects of biofuels related to indirect land-use change (ILUC)
- Luis Panichelli, Swiss Federal Institute of Technology: State-of-the art of modeling: 20 min. presentation and 10 min. group discussion
 - Alan Grainger, University of Leeds: Available data sets and issues: 20 min. presentation and 10 min. group discussion
 - Guidance for breakout session 1
- 10:15 Break
- 10:45 Breakout session 1: Assessment of the “current reality” related to ILUC
- Breakout groups to be assigned
 - Each breakout group will identify limitations, uncertainties, and key issues of data and models, as well as disconnects between model needs and data availability
- 12:00 Lunch
- 1:00 Plenary
- Jeff McNeely, International Union for Conservation of Nature: Comparative analysis of the current/proposed bioenergy regulations’ perspective on land-use change – 20 min. presentation and 10 min. group discussion
 - Reports from breakout session 1
 - Group discussion to prioritize critical areas that need to be addressed
 - Guidance for breakout session 2
- 2:00 Breakout session 2: Identification of strategies for research
- Random breakout groups to be identified
 - Groups to identify major needs for data and model development and research strategies, based on limitations and uncertainties identified in breakout session 1
- 3:00 Break (during the break, participants should prepare to depart for the 4:30 field trip)
- 3:30 Plenary: Participant “3 in 5”¹ presentations of work related to land-use change and bioenergy (part 1)
- Eddie Bright - [Coastal Change Analysis Program](#)
 - Elliot Campbell - [Potential Bioenergy from Abandoned Agriculture](#)
 - Mike Edgerton - [Yield Estimates](#)
 - Nancy Harris - [Estimating Indirect Emissions from Land-Use Change](#)
 - Keith Kline - [Alternative Paradigms for Land-Use Change](#)
 - Aaron Levy - EPA's Land-Use Change Work for the Renewable Fuels Standard
 - Jeff McNeely - [International Activities on Biofuels](#)
 - [Jesper Kløverpris](#)

¹ Maximum of three PowerPoint slides to be presented in a maximum of five minutes

4:30 Field trip to switchgrass planting site

6:30 Casual dinner (off-site and immediately following field trip)

Day 3: Wednesday, May 13 – Identifying Next Steps

8:00 Continental breakfast

8:30 Review progress and plans for day 2 and any adjustments as needed

8:45 Plenary: Participant “3 in 5” presentations of work related to land-use change and bioenergy (part 2)

- John Saddler – [ARS Research Related to BioFuels](#)
- Siwa Msangi - IFPRI [Research Related to Land-Use Change Bioenergy](#)
- Joerg Priess - [Biofuels in Brazil and India: Options, Impacts, Limitations](#)
- Guido Reindhart - [IFEU Work Related to Land-Use Change](#)
- Raju Vatsavai - [Biomass Monitoring: Challenges and Research Opportunities](#)
- Peter Verburg - [Spatial Modelling of Land Use and Bioenergy Crop Allocation](#)
- Tris West - Land-Use Change and Carbon Accounting
- Cesar Izaurralde (representing GLBRC Sustainability) - GLBRC Methodology for Land Use and Biofuel Modeling
- Cesar Izaurralde (representing JGCRI Integrated Assessment) - Global Analysis of Terrestrial Carbon with MiniCAM
- Bruce Dale – [2 in 1](#)

9:45 Plenary

- Reports back from breakout session 2
- Group discussion on research and collaboration strategies
- Guidance for breakout group 3

10:30 Break

11:15 Breakout session 3: Planning for future research and collaboration

- Participants self-select into action planning teams (approximately 5 – 8)
- Teams develop draft research plans that includes overall objectives, key actions/steps, implementing partners, tentative dates, identified blocks and recommended solutions, proposals for cooperation, year one launch plan, etc.

12:00 Lunch

1:00 Continue discussion within breakout groups 3: complete discussion and prepare for plenary presentations

2:00 Plenary: Reports back from breakout session 3 on strategic research plans and next steps, with group discussion following each presentation

3:00 Break

3:30 Plenary: Moving forward to address data and modeling needs that will improve estimates

of direct and indirect effects of land-use change due to bioenergy

- Short-term, practical steps to jump-start implementation of workshop plans
- Proposals for cooperation
- Opportunities for US government
- Opportunities for follow-up in future events

4:30 Final comments (organizing team, DOE, and selected participants)

5:00 Adjourn

6:30 Group dinner

Day 4: Thursday, May 14 – Writing Up Results

8:00 Continental breakfast

8:30 A subset of workshop participants (per prior arrangements) will summarize key findings and prepare summary report of the meeting. The report will focus on ways to make progress in research, data, and modeling in order to improve estimates of direct and indirect land-use effects of bioenergy.

12:00 Adjourn