

**Bioenergy Sustainability and Land-Use Change Report  
Oak Ridge National Laboratory (ORNL)  
January 2011**

**ORNL Publications:**

Dale VH, Efroymsen RA and Kline KA. In press. The land use – climate change – energy nexus. *Landscape Ecology*.

McBride, A, VH Dale, L Baskaran, M Downing, L Eaton, RA Efroymsen, C Garten, KL Kline, H Jager, P Mulholland, E Parish, P Schweizer, and J Storey. In press. Indicators to support environmental sustainability of bioenergy systems. *Ecological Indicators*

Reports from the California Low Carbon Fuel Standard Expert Work Group on land-use change (CARB LCFS EWG) were posted on January 12. During CY2010, ORNL made substantive contributions to EWG discussions and drafts. The final EWG reports are accessible to the public here: <http://www.arb.ca.gov/fuels/lcfs/workgroups/ewg/expertworkgroup.htm>

**ORNL Invited Talks and Presentations:**

Latha Baskaran provided SWAT implementation support to Sheila Christopher (VPI) for a project funded by Catchlight Energy (Chevron & Weyerhaeuser) to understand the environmental effects of intercropping switchgrass in pine plantations.

January 26: Debo Oladosu presented, “Empirical Analysis of the Sources of Corn Used for Ethanol Production in the United States: 2001-2009” for a meeting and Webinar of stakeholders organized by NCGA.

**ORNL CBES Forum**

The Center for Bioenergy Sustainability Forum was held on January 27, 2011. Allen McBride and Virginia Dale presented “ Indicators to Support Environmental Sustainability of Bioenergy Systems.”

**Other Activities:**

January 18: Keith Kline was asked to submit an overview of the ongoing “Global Sustainability Bioenergy (GSB) Project” to the next issue of the Global Land Project’s “GLP News.” This bi-annual publication is available electronically at <http://www.globallandproject.org/newsletter.shtml>.

**Meetings Attended by ORNL staff:**

Yetta Jager participated in a quarterly USDA project PI meeting with Indrajeet Chaubey and other researchers from Purdue University. Purdue has asked ORNL to contribute to an informal collaboration in a comparison among Tennessee, Arkansas, and Indiana watersheds. Latha Baskaran will share SWAT inputs for Vonore, Tennessee, which were originally created as part of an ORNL/LDRD program (V. Dale et al.), and these will be used with the NAPRA model.

January 11: Yetta Jager visited with May Wu and Eugene Yan at Argonne as part of a collaborative research effort to forecast water quality and aquatic biodiversity changes associated with incorporating bioenergy crops into the agricultural landscape.

January 18: Keith Kline participated in the ISO PC-248 “Sustainability Criteria for Bioenergy” Work Group webinar on GHG emission methods. ORNL facilitated the linkage between this new work group and an ongoing ISO effort to develop standards for the Carbon Footprint of Products.

January 19: Robin Graham, Bob Perlack, Budhu Budhendra, and Virginia Dale attended the Office of the Biomass Program (OBP) Analysis and Sustainability January Quarterly, Washington, D.C. Several other ORNL staff (Keith Kline, Matt Langholtz, Erin Webb, Esther Parish, Nagendra Singh) participated via Live Meeting.

January 26: ORNL participated in the Council for Sustainable Biomass Production Field Testing Task Force meeting, supporting efforts to develop practical approaches to measure sustainability for cellulosic bioenergy crops.

**Upcoming ORNL Visits/Events:**

February 2: Virginia Dale will give a talk at the University of Tennessee on “Sustainability indicators for bioenergy” through the Sustainable Technology Through Advance Interdisciplinary Research (STAIR) weekly seminar.

February 6-9: Keith Kline was invited to speak at the Advance 2011 Biodiesel Conference and Expo (see <http://www.biodieselconference.com/2011/>). He will contribute to a panel on “Views of Food and Fuel” from the perspectives of farm producers, environmental non-governmental organizations (NGOs) and scientific analysis. The session will highlight why food-fuel competition issues will likely remain important for any bioenergy crop in coming years.

April 5: OBP Sustainability Platform Peer Review, Washington, D.C.

May 2-5: 33rd Symposium on Biotechnology for Fuels and Chemicals, Seattle.