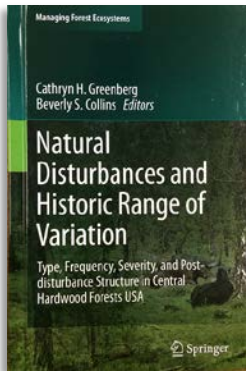


## Bioenergy, Sustainability, and Land-Use Change Report Oak Ridge National Laboratory (ORNL) November 2015

### Publications



- Dale VH, Hughes MJ, Hayes DJ. 2015. Climate change and the future of natural disturbances in the central hardwood region. Pages 355-370 in Greenberg, C. and Collins, B. (Editors) "Natural Disturbances and Historic Range of Variation: Type, Frequency, Severity, and Post-Disturbance Structure in Central Hardwood Forests" Springer: New York.
- Pollesch NL and Dale VH (submitted). Normalization in sustainability assessment: Methods and implications. Ecological Economics.

### ORNL Presentations

**Nov. 2-6:** Keith Kline, Maggie Davis, and Virginia Dale attended the Society of American Foresters annual convention in Baton Rouge, Louisiana. Keith presented on "*Bioenergy Trade and Sustainability Assessment: Science, Truth and Consequences*", and Maggie presented "*Indirect Effects of Bioenergy: International Standards and Science*" in a special session on **Sustainability of International Trade in Bioenergy**. Virginia gave a presentation on "*Using Landscape Design to Assess Sustainability of Wood Biomass Production from Southeast US Forests.*"



**Nov. 13:** Virginia Dale gave a talk at Western Carolina University on "Defining and deploying progress toward sustainable bioenergy systems."

**Nov. 16-29:** Yetta Jager participated in a Working Group (WG) on Organisms-to-Ecosystems at the NSF National Institute of Mathematical and Biological Sciences. A major thrust of the WG is to provide guidance and models to help EPA and other regulators scale effects of contaminants to the population and ecosystem-level. One goal is to develop production response curves to relate service-providing entities (i.e., fishes, nutrient reductions) to ecosystem services. For more about the NIMBioS working group see [www.nimbios.org/workinggroups/WG\\_o2e](http://www.nimbios.org/workinggroups/WG_o2e)



## Other CBES Activities

**Nov. 4:** Yetta Jager participated in a call with the Gulf of Mexico Hypoxia Taskforce, headed by EPA (Katie Flahive). Participants included Kyra Reumann-Moore, Hazel Groman, May Wu (ANL) and Kristen Johnson (DOE). The purpose of the call was to present BETO-funded efforts in the Mississippi River Basin to the Taskforce and to initiate future lab involvement in Taskforce meetings.

Virginia Dale had two Skype calls with members of IEA Bioenergy Tasks 38 and 43 regarding planning for the upcoming Bioenergy Study Tour in the Southeastern United States.

Virginia Dale and Keith Kline engaged in several conference calls with Kevin Comer (Antares), Doug Karlen (USDA) and other colleagues regarding planning for the new DOE Landscape Design Project supported by BETO.

**Nov. 25:** Virginia Dale had a conference call regarding planning for Study Tour with Ben Wigley (National Council for Air and Stream Improvement) and Bob Emory (Weyerhaeuser)

## Upcoming ORNL Visits/Events:

**Dec. 1-3:** Virginia Dale and Keith Kline will attend the DOE Landscape Design Project kick-off meeting being held in Ames, IA.

**Dec 3:** Esther Parish and Rebecca Efrogmson will participate in a panel discussion “Environmental aspects of aviation biofuels in Georgia” at the “Georgia Sustainable Aviation Biofuels Workshop” at Georgia Institute of Technology.

**Dec. 9-10:** ORNL staff will participate in the Billion Ton 2016 review meeting in Washington DC.” Invited staff include: Matt Langholtz, Laurence Eaton, Erin Webb, Maggie Davis, Craig Brandt, Keith Kline, Anthony Turhollow, Aaron Myers, Yetta Jager, Rebecca Efrogmson, Tim Theiss, Mike Hilliard, and Virginia Dale.

**Dec. 9:** Yetta Jager has accepted an invitation from the USEPA to present individual-based sturgeon modeling of mercury uptake to the Office of Pesticide Programs in Washington, DC. EPA is interested in modeling the effects of agricultural contaminants in the Central Valley on ESA-listed sturgeons.

**Jan. 19-21:** Virginia Dale, Donna Perla (EPA), and Doug Karlen (USDA) have organized two sessions on the bioeconomy for the Jan. 19-21 Conference in Washington, DC, of the National Council on Science and the Environment on the Food-Energy-Water Nexus: <http://foodenergywater nexus.org/>. The USDA, DOE, and EPA are sponsors for this conference.



### The Food-Energy-Water Nexus

16<sup>th</sup> National Conference and Global Forum  
on Science, Policy and the Environment

January 19-21, 2016

Hyatt Regency Crystal City at the  
Washington, DC National Airport

**Jan 20-21:** Yetta Jager was invited to attend the Mississippi River Basin / Gulf Hypoxia Initiative meeting in Iowa. This initiative, led by the USFWS, seeks to provide guidance and also involves developing a decision support modeling framework for farmers.

**Apr. 4-8:** The US Chapter of the International Association of Landscape Ecology (IALE) will have three symposia that were organized by ORNL staff as follows:

- *Reshaping Landscapes: Bioenergy and Biodiversity II* – organized by Yetta Jager
- *Opportunities and Barriers for Sustainable Bioenergy* – organized by Keith Kline
- *Landscapes Designs that Incorporate Sustainable Wood-based Bioenergy: a Focus on the Southeastern United States* – organized by Virginia Dale

**Apr. 10-14:** ORNL and DOE are hosting a bioenergy study tour in the southeastern United States. Participants will include researchers associated with DOE and its national laboratories, the International Energy Agency (IEA), university staff and students, and industry. The goal of the tour is to have participants develop a better understanding of bioenergy systems in the southeastern United States.

**May 8-12:** Virginia Dale is invited to give a plenary lecture at the International Society of Ecological Modelling Global Conference in Baltimore, Maryland – see <http://www.isemconference.com/>. The title of her talk is "Tradeoffs in sustainability assessment."



**Jul. 17-20:** Yetta Jager was invited to the Symposium, "Conservation of aquatic ecosystem connectivity: from planning to practice," at the Society of Conservation Biology in Madison, Wisconsin.