

**The Center for BioEnergy Sustainability (CBES)
At Oak Ridge National Laboratory (ORNL)
Is pleased to announce that we are holding our next Forum on
*Wednesday May 8th, 2013***

In the Ocoee Room (Room 189) in Building 1505 at 3:30pm

**Please note* that there will be NO reception following the forum at Virginia Dale's house due to other commitments*

**This month's forum topic is:
Bio Land Use Change and Overview**

Guest Speaker:

*Daniel Inman – National Bioenergy Center,
National Renewable Energy Laboratory, Golden, CO*

Bio

Danny joined NREL in February 2008. His research is mostly centered on lifecycle assessment of renewable energy technologies and system dynamics modeling of biofuel markets, land use change, and water footprint implications of biofuels. Additional research interests include statistical data mining, improved feedstock production practices, and feedstock logistics systems.

Abstract:

NREL has have developed a system dynamics approach to land use change (LUC) modeling, called BioLUC. This model captures key feedback processes that drive the allocation of land over time, such as imbalances between production and consumption of agricultural products, demand for animal products, crop and animal product imbalances between production and consumption, re-allocation of existing crop land among different uses, re-distribution of the land bases, to name a few. In addition to this, the BioLUC model captures changing population dynamics, gross domestic product, and dietary shifts at a regional level.

Gaining insights about how seemingly disparate policies interact and affect global land use change is important for the biofuels industry as a whole and policy makers at all levels. Biofuels offer one alternative to petroleum based liquid transportation fuels, and have been shown to offer benefits in terms of greenhouse gas emissions. However, compared to petroleum-based fuels, biofuels have a much larger land footprint because of the land needed to grow biomass feedstocks. Models such as the BioLUC allow us to examine how certain scenarios unfold within

a specific context, and help elucidate a more sustainable path forward for biofuels. Currently the LUC modeling community lacks consensus on the causal relationships that underpin modeling results. BioLUC is intended to complement existing LUC modeling approaches and to improve the understanding of global LUC drivers and dynamics by allowing examination of global LUC under diverse scenarios and varying model assumptions.

For further information please check the CBES website <http://www.ornl.gov/sci/ees/cbes/>