

**NASA Land-Cover and Land-Use Change Science Team Meeting  
UMUC Inn and Conference Center  
January 11-13, 2005**

*Day 1 Tuesday, January 11<sup>th</sup>, 9.00 - 5.30*

*Program Overviews*

**Justice (UMD)** Welcome and Meeting Objectives

**Tsaoussi (NASA HQ)** Future research directions for earth science at NASA

**Gutman (NASA HQ)** State of the LCLUC Program and the CCSP LULCC

**Justice (UMD)** Program Scientist Perspective

*Break 10.30 – 11.00*

*Research Results*

**Skole (MSU)** Pan Tropical Deforestation

**Steyaert (USGS)** The Influence of Historical and Projected Land Use and Land Cover Changes on Land Surface Hydrology and Regional Weather and Climate Variability

**Irons (NASA GSFC)** Status of Landsat Continuity Update

*Lunch 12-1*

*Carbon and Land Use*

**Cavallaro (USDA/CSREES)** Land Use, Carbon and Global Change related research in the USDA CSREES program

**Emanuel (NASA HQ)** The Carbon Road Map, NACP and Land Use

**Wickland/Emmanuel (NASA HQ)** Advanced Planning for Carbon and Ecosystems Focus Area

**Foley (U. Wisconsin)** Estimating Carbon Emissions from Historical Changes in Global Agricultural Land

**Chopping (Montclair State University)** Quantifying Changes in Carbon Pools with Shrub Invasion of Desert Grasslands Using Multi-Angle Data from EOS Terra and Aqua

**Curran (Yale)** Influence of Humans, Climate, and Fire on Forest Ecosystems and Carbon Dynamics in Indonesian Borneo

*Break 3.00 - 3.20*

*LBA Results Presentations*

**Batistella (IU Bloomington)** Human and Physical Dimensions of Land Use/Cover Change in Amazonia: Towards a Multiscale Synthesis

**Cochrane (MSU)** The Synergism of Fire, Forest Fragmentation and Selective Logging in the Brazilian Amazon

**Nepstad (WHRC)** Amazon Scenarios: Modeling Interactions Among Land Use, Fire and Climate

**Walsh (UNC)** Modeling the Scale Dependent Drivers of LCLU Dynamics in Northeastern Ecuador: Simulating Patterns of Landscape Change and Assessing their Cause and Consequence through Multi-Level Models and Cellular Automata

**Brown F. (WHRC)** Land-cover Land-Use Changes in the Tri-Frontier Area of Brazil, Bolivia, and Peru: Implications for Sustainable Land Use in Southwestern Amazonia

**Walker (MSU)** A Basin-Scale Econometric Model for Projecting Future Amazonian Landscapes

*Close 5.30pm*

**Day 2, Wednesday, January 12<sup>th</sup>, 9.00 – 5.00**

*The Water Cycle and Land Use*

**Jasinski (NASA GSFC)** The Water Cycle Road Map and Land Use

**Zhou (Georgia Institute of Technology)** Using MODIS Data to Characterize Climate Model Land Surface Processes and the Impacts of Land Use/Cover Change on Surface Hydrological Processes

**Giambelluca (U. Hawaii)** The Role of Land-Cover Change in Montane Mainland Southeast Asia in Altering Regional Hydrological Processes under a Changing Climate

**Niyogi (CSU)** Climate Study with a Focus on the Land-Use Land-Cover Change and Associated Changes in Hydrological Cycles in the Southeastern United States

**Simard (JPL)** Large Scale Assessment of Landscape Changes and Recovery in Forest Structure of Mangrove Wetlands Subject to Human, Freshwater Diversion, and Natural Disturbances (hurricanes, other severe storms, sea level change) using Enhanced SRTM Data

*Break 10.40 – 11.00*

**Townsend (UMD Appalachian Lab)** Spatial Patterns of Forest Disturbance and Consequences for Regional Water Quality

**Foley (U. Wisconsin)** Agricultural Land Use and the Transformation of Planet Earth: Investigating the Effects of Land Use Practices on the Ecological, Biogeochemical, and Hydrological Systems of the Planet

**Anderson (U. Wisconsin)** Multi-Scale Remote Assessment of Land-Surface Hydrologic Response to Natural and Anthropogenic Stressors: A Case Study in the Florida Everglades

*Lunch 12-1*

*Poster Session 1.00 - 3.00*

**Brown de Colstoun (NASA GSFC)** Consequences of Land Cover/Use Changes on Two National Parks in the Upper Delaware River Basin

**McRae(USFS)** Wildfire Impacts on Carbon Stocks and Exchanges in Forests of Central Siberia: Quantifying Effects of Fire Intensity, Fire Severity, and Burning Conditions

**DeFries (UMD)** Reducing Uncertainties of Carbon Emissions from Land Use-Related Fires with MODIS Data: From Local to Global Scale

**Milesi (NOAA NGDC)** Development Sprawl Impacts on Terrestrial Carbon Dynamics

**Goward (UMD)** North American Forest Disturbance and Regrowth since 1972: Empirical Assessment with Field Measurements and Satellite Remotely Sensing Observations.

**Grossman (NatureServe)** Delineating Ecological Systems and Advancing Decision Support Tools for Land Use Planning

**Lin (WHRC)** Forest Biomass and Land-Use Change in Central Africa: Reducing Regional Carbon Cycle Uncertainty

**McDonald (U. Washington)** Diagnosis and Prognosis of Changes in Lake and Wetland Extent on the Regional Carbon Balance of Northern Eurasia

**Xiao X. (UNH)** Quantifying CO<sub>2</sub> Fluxes from Boreal Forests in Northern Eurasia: An Integrated Analysis of Flux Tower Data, Remote Sensing Data and Biogeochemical Modeling

**Messina (MSU)** Simulating the Effects of "Plan Colombia" on Land Use and Land Cover in the Ecuadorian Amazon: A Complex Systems Approach

**Xiao X. (CSU)** Northern Eurasian C-Land Use Climate Interaction in the Semi-Arid Regions

**Qi (MSU)** Land Use and Land Cover Dynamics of China in Support of GOF/GOLD and NEESPI Sciences

**Radeloff (U. Wisconsin, Madison)** Post-USSR Land Cover Change in Eastern Europe – Socioeconomic Forcings, Effects on Biodiversity, and Future Scenarios

**Shugart (UVA)** Modeling the Carbon Dynamics of the Eurasian Boreal Forest

**Sun (UMD/GSFC)** Comparative Studies on Carbon Dynamics in Disturbed Forest Ecosystems: Eastern Russia and Northeastern China

**Tubiello (Columbia U.)** Carbon, Climate and Managed Land in Ukraine: Integrating Data and Models of Land Use for NEESPI

**Neigh (NASA GSFC)** Identifying and Understanding Carbon Cycle Implications of North American Natural and Anthropogenic Disturbances: 1982-2005

**Markham (NASA GSFC)** Landsat Radiometric Calibration: Towards a 20-Year Record of Calibrated Thematic Mapper Class Data for Carbon Cycle Studies

**Xiao J. (UNC)** Carbon Sink Due to Woody Encroachment in Non-Forest Areas in the Western U.S. and Impacts of Fire and Climate

**Loboda (UMD)** Impact of Climate and Land Use Change on Wildland Fire Frequency and the Amur Tiger

**Wessels (UMD)** Assessing the effect of human-induced land degradation on ecosystem function in the former homelands of South Africa

**Woodcock (CRSA)** Quantifying the Effects of Land Use Change on Carbon Budgets in the Black Sea Region

**Lacasse (USGS)** Landsat 7 SLC-off data products

**Henebry (UNL)** Consequences of Institutional Change: Land Cover Dynamics in Kazakhstan -- A Review of Findings and Accomplishments

**Matsui (CSU)** Integrated Regional Climate Study with a Focus on the Land-Use Land-Cover Change and Associated Changes in Hydrological Cycles in the Southeastern United States

**3.00**

***Northern Eurasia Earth Science Partnership Initiative (NEESPI)***

**Deering (NASA GSFC)** Status of the NEESPI

**Ranson (NASA GSFC)** Boreal Zone Forest Type and Structure from EOS Data Sets

**Csiszar (UMD)** Fires in Eurasia

**Maynard (NASA GSFC)** Reindeer Mapper

**Bergen (U. Michigan)** Modeling Siberian Boreal Forest Land-Cover Change and Carbon Under Changing Economic Paradigms

**Krankina (OSU)** The GOFIC/GOLD Northern Eurasia Regional Information Network

*Close 5pm*

***Day 3, Thursday, January 13<sup>th</sup> 8.45 - 12.30***

***Observations and Data***

**Birk (NASA HQ)** GEO and GEOSS Status Report

**Townshend (UMD)** GOFIC/GOLD and IGOL International Programs - Status Report

**Masek (NASA GSFC)** Landsat Data Record

**Skole (MSU)** The Global Tropical Forest Information Center - TRFIC-2

**Townshend (UMD)** Global Land Cover Facility

***Break 10.45 - 11.00***

**Roy (UMD/GSFC)** A focus group study of factors that promote and constrain the use of MODIS fire products by resource managers in southern Africa

**Vermote (UMD)** Interdisciplinary Long Term Data Set from AVHRR, MODIS and VIIRS Instruments

**Justice (UMD)** MODIS > VIIRS Land Status

**Gutman (NASA HQ) /Justice (UMD)** Meeting Summary and Future Directions for LCLUC

***12.30 Close of Meeting***