

NASA Land-Cover and Land-Use Change Science Team Meeting
UMUC Marriott Inn and Conference Center
April 4 - 6, 2007

Day 1 Wednesday, April 4th, 9.00AM – 5.30PM
General Session Room 2100/2102/2104

9.00 – 9.45 Programmatic Presentation

Gutman (NASA HQ) LCLUC Program Status
Justice (UMCP) Strategic Issues for LCLUC

9.45 – 10.15 Review Presentation (30 minutes)

Pielke (CU-Boulder) Land Use and Climate Interactions

10.15 – 10.45 Coffee Break

10.45 – 12.15 Review Presentations (30 minutes) Boreal Forests Session

Shugart (UVA) Carbon Dynamics in Boreal Forests (*Input from Krankina, Sun, Li*)

Soja (NASA Langley) Fires and Climate Interactions in the Boreal Zone (*Input from Csiszar, Conard*)

Groisman (NOAA) LCLUC, Climate, Environment and Carbon in the NEESPI Program: An Update

12.15 – 1.15 Lunch Room 2101/2103/2105

1.15 – 2.15 Poster Session Rooms 2110 & 2112

2.15 – 2.45 Programmatic Presentation (20 minutes) Agricultural Session

Sheffner (NASA HQ) The Agricultural Efficiency Applications Program

2.45 – 3.15 Review Presentation (30 minutes)

Foley (UW-Madison) Agriculture, Carbon and Climate Interactions (*Input from Kling, Tubiello*)

3.15 – 3.45 Coffee Break

3.45 – 4.05 Science Presentation (20 minutes) LCLUC Data Session

M. Hansen (SDSU) Establishing a Global Forest Monitoring Capability Using Multi-Resolution and Multi-Temporal Remotely Sensed Data Sets

4.05 – 4.50

Programmatic Presentation (20 minutes)

Masek (NASA GSFC) MDGLS Phase II and III

Open Discussion

4.50 – 5.30 Programmatic Presentation (20 minutes)

Irons (NASA GSFC) LDCM Status, Report on the Science Team Meeting and Data Gap Study Status

***Open Discussion* on LCLUC requirements from the Landsat Program**

Day 2 Thursday, April 5th, 9.00AM – 5.10PM
General Session Room 2100/2102/2104

9.00 – 10.00 Review Presentations (30 minutes) Arctic and Arid Lands Session

Walker (UAF) Climate, Sea-Ice, Land-Cover, Carbon, Human Interactions in the Arctic Zone:
An Overview

Sokolik (Georgia Tech) Aerosols and land use interactions (*Input from Munroe*)

10.00-10.30 Coffee Break

10.30 – 11.00 Review Presentations (30 minutes) Biodiversity Session

A. Hansen (Montana State) Biodiversity, Land Use and Climate: State of the Science (*Input from Liu, Radeloff*)

11.00 – 11.30 Open Discussion (30 minutes): Future Directions for LCLUC and Biodiversity Research (Chair – A. Hansen)

11.30 – 12.00 Review Presentations (30 minutes) Tropical Session

Chomentowski (MSU) Tropical Deforestation and Carbon Interactions: State of the Science
(*Input from Curran, Morton, Laporte*)

12.00 – 1.10 Lunch Room 2101/2103/2105

1.10 – 1.40 Margerin (SSAI) REASON: SAXTA Demonstration in General Session Room

1.10 – 2.10 Poster Session Rooms 2110 & 2112

POSTERS MUST BE REMOVED AFTERWARDS

2.10 – 2.40 Review Presentation (30 minutes)

Nepstad - LBA Science: Review of Climate, Carbon and Land Use Interactions (*Input from Moran, Walker, Walsh*)

2.40 – 5.10 Breakout Discussion Groups

Land Use and Climate Interactions (Co-Chairs: Dickinson, Groisman) General Session Room

- **Priority Areas for Research**
- **Obstacles to Progress**
- **Near-term Opportunities**
- **Recommendations**

Land Cover and Land Use Change Data (Co-Chairs: M. Hansen, Woodcock) Room 1105

- **Priority Data Needs for LCLUC Research**
- **Steps to Improving Data Availability and Access**
- **Obstacles to Progress**
- **Recommendations**

Day 3 Friday, April 6th, 9.00AM – 12.30PM
General Session Room 2100/2102/2104

9.00 – 9.30 Programmatic Presentations (20 minutes)

Herold (Friedrich Schiller University Jena) GOFC/GOLD Deforestation Initiative and the LCCS

9.30 – 10.00 Review Presentation (30 minutes)

B. Turner (Clark University) Landscape Vulnerability and Resilience: The State of the Science

10.00 – 10.30 Review Presentation

Simard (NASA JPL) Recent Advances in the Use of Microwave Data for the Study of Land Cover and Land Use Change

10.30 – 10.45 Coffee

10.45 – 11.15 Programmatic Presentations

Saatchi (NASA JPL) Overview of Land Cover and Land Use Change in the North American Carbon Program (*Input from Goward, Tucker, Masek*)

11.15 – 11.40 Breakout Discussion Report-Back (25 minutes)

11.40 – 12.20 Gutman (NASA HQ) Meeting Summary

Open Discussion: Feedback from the Science Team

12.20 – 12.30 Justice (UMCP) Summary Actions from the Meeting

12.30 Lunch Room 2103/2105

Poster Session (Posters will remain up for first two days ONLY in rooms 2110 & 2112)

Barnes (SDSU) United States Land Cover Land Use Change, Albedo and Radiative Forcing: Past and Potential Climate Implications

Chomentowski (MSU) REASON TRFIC/Landsat.org

Chopping (Montclair State) Mapping Southwestern Forest and Woody Biomass, Crown Cover and Canopy Height using MISR

Christman (Clark University) Disaggregating Phenological Variation from Discrete Land-Cover Change in the Rio Lerma-Chapala Watershed, Mexico

Conard (USDA FS) Wildfire Impacts on Carbon Stocks and Exchanges in Forests of Central Siberia: Quantifying Effects of Fire Intensity, Fire Severity, and Burning Conditions

Covington (NASA GSFC) MDGLS Phase 1 and 2

Csiszar (UMCP) Generating a Regional-Scale AVHRR Active Fire Dataset from a Network of Direct-Readout Stations in Northern Eurasia

Curran (Yale) Effects of Logging, Plantation Conversion, Biomass Burning and Regrowth on Carbon Dynamics in Bornean Peat and Dipterocarp Forests: Implications for Global Carbon Cycle

Davis (UMCP) MODIS Products at the Global Land Cover Facility

Dickinson (Georgia Tech) Using MODIS Data to Characterize Climate Model Land Surface Processes and the Impacts of Land Use/Cover Change on Surface Hydrological Processes

Fox (East-West Center) The Role of Land-Cover Change in Montane Mainland Southeast Asia in Altering Regional Hydrological Processes under a Changing Climate

Galford (Brown) Biogeochemical Consequences of Land-Use Transitions along Brazil's Agricultural Frontier

Gitelson (UNL) Land Cover Land Use Change Effects on Surface Water Quality: Integrated MODIS and SeaWiFS Assessment of the Dnieper and Don River Basins and their Reservoirs

A. Hansen (Montana State) Vulnerability of US National Parks to Land Use and Climate Change Variability

M. Hansen (SDSU) Forest Change Detection in Boreal Regions Using MODIS Data Time Series

Huang (UMCP) Automated Forest Cover Change Analysis using TDA-SVM

Jin (UCI) Fire-induced Changes in Albedo and the Associated Radiative Forcing: A Comparison of Boreal Canada and Australia Tropical Savannas

Kling (Iowa State) Interactive Drivers of Land-Cover/Land Use Change in Upper Mississippi River Basin (Part II) - An Integrated Modeling System of Climate, Conservation Policy, and Land-Manager Choices

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

Lawrence (UVA) Repeated Disturbance in the Southern Yucatan: Biogeochemical and Hydrological Feedbacks on Biomass Accumulation

Li (UNH) Quantifying CO₂ Fluxes from Boreal Forests in Northern Eurasia: An Integrated Analysis of Flux Tower Data, Remote Sensing Data and Biogeochemical Modeling

Lipscomb (UNC-CH) Urban Landscape Patterns: Impacts on Hydrologic Processes and Nitrogen Pollution

Loughner (UMCP) How Do Changes to the Urban Environment Affect Precipitation and Air Quality?

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

Lutz (UVA) Validation of an Individual-Based Boreal Forest Gap Model with Remote Sensing Imagery Analysis

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

Munroe (OSU) A Comprehensive Statistical Analysis System to Associate Local Land-Cover/Land-Use Change and Regional Aerosol Composition and Concentration

Ojima (CSU) Social-Economic, Land use and Climate Effects on Eurasian Semiarid Systems of Mongolia, Kazakhstan, and China

Ozdogan (NASA GSFC) The Impact of Irrigation and Croplands on NLDAS Energy and Water Balance Components

Pielke (CU Boulder) Poster 1: Continental-Scale Calibration of Surface Energy and Heat Flux in CSU Unified Land Surface Model Using MODIS

Poster 2: Potential Impacts of Aerosol- Land - Atmosphere Interactions

Prashad (ASU) Investigation of Rapid Urbanization Processes Using ASTER, MODIS, and Landsat Data

Radeloff (UW-Madison) Effect of Fire, Extreme Weather and Anthropogenic Disturbance on Avian Biodiversity in the US

Sheng (UCLA) Satellite-based Lake Dynamics in the Tibetan Plateau in the Context of Global Change

Simard (NASA JPL) Large Scale Assessment of Landscape Changes and Recovery in Forest Structure of Mangrove Wetlands Subject to Human Activities, Freshwater Diversion and Natural Disturbances Using Enhanced SRTM Data

Small (Columbia) Development and Sensitivity Analysis of High Resolution Land Surface Parameters from Satellite Data and their Use in a Mesoscale Model

Smith (Yale) A Tigris-Euphrates Watershed Study

C. Song (UNC-CH) Impacts of Land-Cover/Land-Use Change on Terrestrial Ecosystem Carbon Budget

K. Song (UMCP) Retrieving the Phenology Characteristics for Monitoring Deciduous Forests of the World

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

Swatantran (UMCP) Mapping Habitat for the Ivory-Billed Woodpecker and the California Spotted Owl: A Multi-Sensor Fusion Approach

Temirbekov (CSU) Land cover/land Use Change in Post-soviet Kazakhstan

Togtohyn (National University of Mongolia) Socio-economic and climate drivers of land use and land cover changes in Mongolia

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

Tuttle (NOAA) Global Constructed Impervious Surface Area (ISA) Density Product

Vermote (UMCP/NASA GSFC) Land Long Term Data Records Current Status

Westberg (NASA Langley) Developing Weather and Climate Datasets for Use in Fire Weather and Bioclimatic Models

Wolfe (NASA GSFC) Poster 1: MODIS Land Collection 5 Update

Poster 2: MODIS 4 NACP Land Products

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