

3rd NASA Land Cover and Land Use Change Science Team Meeting, Airlie House, Warrenton, Virginia, May 18-21, 1999.

Agenda

The purpose of this meeting is to present in-depth reports from the LCLUC Phase 1 studies*, to identify the significant results, emerging theories, and policy implications from the research, to plan the packaging of program results, to inform the Science Team of recent programmatic developments and opportunities and to discuss current state of the science and future directions for the NASA LCLUC program. Three and a half days have been allocated allowing time for detailed presentations**, questions and open discussion. One objective of this meeting is to continue to build a network of scientists undertaking land cover and land use research, sharing experience and building a strong research community.

*The LBA LCLUC projects which have been going for just one year will not be asked to formally present results at this meeting but PI's will be asked to participate in the discussions.

** We have decided on concurrent sessions to allow more time for discussion.

May 18th Day 1, 9.00 am

Plenary Session - The Jefferson Room

Welcome and Objectives of the Meeting – C. Justice / J. Ranson

Programmatic - LCLUC the first years: a programmatic retrospective – A. Janetos

Programmatic - Current Status of the LCLUC program – C. Justice

10 – 12.15 am **Concurrent Sessions.**

Concurrent Session 1A – The Jefferson Room

10 – 10.45 Early Results - The dynamics of a semi-arid region in response to climate and water use policy – J. Mustard

10.45- 11.30 Early Results – Assessing future stability of US High Plains landcover integration of process modeling with Landsat, in-situ, modern and paleoclimate data - J. Overpeck

11.30 – 12.30 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: A. Janetos / D. Brown

Concurrent Session 1B – The Audubon Room (located in auxiliary building)

10 – 10.45 Early Results - Land Cover Change in the Great Plains: predicting impacts of regional forest expansion on biogeochemical processes – L. Johnson

10.45- 11.30 Early Results – Quantifying Grassland to Woodland Transitions and the implications for carbon and nitrogen dynamics in the Southwest United States – S. Archer

11.30 – 12.30 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: P. Matson / T. Fisher

LUNCH 12.30 – 1.30 The Airlie Room

Plenary Session - The Jefferson Room

1.30 – 1.50 pm Programmatic - Land use change and policy implications – A. Janetos

1.50 – 2.10 pm Programmatic – The IPCC Report Structure and the Land Cover Chapter – R. Houghton

2.10 – 2.30 pm Programmatic – The USGCRP Carbon Cycle Initiative and Land Use Change – L. Dilling

2.30 – 5.30pm **Concurrent Sessions.**

Concurrent Session 2A – The Jefferson Room

2.30 – 3.15 Early Results – Modeling carbon dynamics and their economic implications in two forest regions: pacific northwestern USA and northwestern Russia – J. Kerkvliet

3.15 – 4.00 Early Results – Effects of the development of the Baikal Amur mainline railroad on patterns of boreal forest cover and carbon fluxes in southern Siberia – E. Kasischke

4.00 – 4.45 Early Results – The role of land-cover change in high latitude ecosystems: implications for the global carbon cycle – D. McGuire

4.45 – 5.30 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: R. Houghton / D. Kicklighter

Concurrent Session 2B – The Audubon Room

2.30 – 3.15 Early Results – Modeling and forecasting effects of land use change in China based on socioeconomic drivers – R. Kaufmann

3.15 – 4.00 Early Results – Time series forest change, land cover/land use conversion and socio-economic driving forces in the Northern Peten District, Guatemala – D. Hayes

4.00 – 5.00 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: R. DeFries / S. Archer

DINNER 6.30 – The Airlie Room

7.30 – 8.15 After Dinner Speaker (The Jefferson Room) – NSF and Land Cover and Land Use Change: status and future directions - Tom Baerwald

Day 2. May 19, 9.00 am

Plenary Session – The Jefferson Room

9.00 – 9.20 Meeting Report - Integrating social, ecological and remote sensing information on secondary growth – R. Walker

9.20 – 9.40 Meeting Report – Amazon LCLUC Pattern to Process – C. Wood

9.40 – 10.00 Programmatic – New developments in the IGBP/IHDP LUCC program – E. Moran

Concurrent Sessions. 10.00 – 12.30

Concurrent Session 3A - The Jefferson Room

10.00 - 10.45. Early Results – Land cover and land use change in southern Yucatan Peninsular Region – B. Turner

10.45 – 11.30 Land Use and Land Cover Change in Sonora, Mexico: trajectories of agricultural intensification and consequences for non-agricultural systems – P. Matson

11.30 – 12.30 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: R. Walker / T. Stone

Concurrent Session 3B – The Studio

10.00 – 10.45 Early Results – Deforestation and degradation in Southern and Central Africa Savannas – S. Prince

10.45 – 11.30 Early Results – Coupling land use and land cover change and ecosystem processes in Miombo Woodlands – P. Desanker

11.30 – 12.30 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: R. Rindfuss/L. Johnson

LUNCH 12.30 – 1.30 The Airlie Room

Plenary Session – The Jefferson Room

2.00 – 3.00

Meeting Report – Fire Management in African Savannas – P. Frost

Research Presentation – Deforestation Dynamics on the Bolivian Frontier – S. Hecht

Concurrent Session 4A – The Jefferson Room

3.00 – 3.45 Early Results – The Process of Land Cover and Land Use Change in Central Africa – D. Wilkie

3.45 – 4.30 Early Results – Study of land use and deforestation in Central African Tropical Forests using high resolution SAR satellite imagery – S. Saatchi

4.30 – 5.30 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: R. Bilsborrow/C. Dobson

Concurrent Session 4B – The Studio

3.00– 3.45 Early Results – Case studies and diagnostic models of the interannual dynamics of deforestation in Southeast Asia – D. Skole

3.45 – 4.30 Early Results – Soils, water, people and pixels: a study of Nang Rong – R. Rindfuss

4.30 – 5.30 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: R. Kaufmann/ C. Wood

DINNER 6.30 – The Airlie Room

Day 3, May 20th

Plenary Session – The Jefferson Room

9.00 – 9.30 Programmatic – The GOFD Project and the role of LCLUC – J. Townshend

9.30 – 10.00 Programmatic – An assessment of the availability and utility of microwave data for the study of land use and land cover change: a review – G. Sun

Concurrent Session 5A – The Jefferson Room

10.00 – 10.45 Early Results – Hierarchical investigation of socioeconomic drivers of decadal scale land cover changes in the upper Midwest – D. Brown.

10.45 – 11.15 Early Results – Causes and Consequences of land cover in a Greater Ecosystem: trend assessment, monitoring and outreach – A. Hansen

11.15 – 12.00 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: D. McGuire / J. Kerkvliet

Concurrent Session 5B – The Studio

10.00 – 10.45

10.45 – 11.15 Early Results - Characterizing land cover heterogeneity and land cover change from multi-sensor satellite data – R. DeFries

11.15 – 12.00 Identifying the significant results, new and improved methods, emerging theories and policy implications from the case studies: discussion. Co Chairs: C. Woodcock /P. Desanker

LUNCH 12.00 - 1.00 – The Airlie Room

Plenary Session – The Jefferson Room

1.00 – 1.30 Programmatic – The direction of NASA ESE and the role of LCLUC – J. Kaye

1.30 – 2.00 Research Presentation – Climate sensitivity of the Middle East landscape - Ron Smith

2.00 - 2.15 Packaging early results for the NASA LCLUC program – C. Justice

2.15 – 4.00 Co Chairs summary reporting of the significant results, new and improved methods, emerging theories and policy implications from the case studies from the concurrent sessions – Discussion

Concurrent Session 4.00 - 5.30

5A Synthesis Group (The Jefferson Room) - developing a synthesis of program findings - Co Chairs – B. Turner / D. Skole

5B Packaging Group (The Studio) – developing a plan for packaging of program results – Co Chairs – J. Ranson / S. Archer

DINNER 6.30 – The Airlie Room

7.30 – 8.15 After dinner speaker (The Jefferson Room) - Rosina

Day 4, May 21st

Plenary Presentation 9.00 – 12.00 – The Jefferson Room

9.00 – 9.30 Programmatic - The Landsat 7 Program: status report – J. Irons

9.30 – 10.00 Programmatic - Future Satellite Missions Relevant for LCLUC – J. Ranson

10.00 – 10.20 Synthesis of Findings – synthesis group report back

COFEE BREAK

10.30 – 10.40 Packaging the Results – group report back

10.40 – 11.40 Programmatic - Future science directions and priority focus areas for the NASA LCLUC program: towards the next LCLUC NRA: open discussion – Chris Justice / Jon Ranson

11.40 – 12.00 Programmatic – Next steps for the LCLUC Program and Action Items from the meeting – Chris Justice

12.00 Close of Meeting, Lunch and Departure.

Guidelines for Early Results Presenters

Early Results presenters are asked to give a 45 minute vu-graph presentation, providing a brief summary statement of the initial proposed project goals and deliverables, an in-depth presentation of project methods, findings and results to-date, an identification of any project course-corrections. A revised schedule for product delivery and project completion should be provided. Presenters should look for opportunities to highlight areas of potential common interest amongst the LCLUC projects, e.g. new methods and techniques, successes and problems and lessons learned. Presenters should try to identify any results that have implications for improved resource management or policy associated with the emerging conventions. Following the presentations the breakout group led by the identified co-chairs will be asked to identify key research findings, identify the priority research questions, any emerging theories and policy implications.

Presenters are requested to bring a digital version of their presentation to the meeting and to put digital versions of their presentations on their LCLUC project WWW site within two weeks of the meeting. An LCD projector will be provided for power-point presentations. Copies of recent papers or preprints could be brought for distribution.

Guidelines for Programmatic Presenters

Programmatic presenters are asked to brief the Science Team on the relevance of the land cover and land use change program to different program opportunities. Presentations should take 20 minutes with 10 minutes for questions. Digital copies of their presentations should be provided for inclusion on the LCLUC WWW page.

Guidelines for Discussion Co-Chairs

After the results presentations, Co-Chairs are asked to take the breakout group through a 45 minute session identifying the significant results, the priority research question, any new methods or techniques, emerging theories and policy implication. One of the Co-chairs will be asked to give a 10 minute presentation of these summary findings on the afternoon of Day 3.