NASA Land-Cover and Land-Use Change Science Team Meeting UMUC Inn and Conference Center October 10 – 12, 2006

Day 1 Tuesday, October 10th, 9.00AM – 5.20PM General Session Room 1123

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

10.00 – 10.20 Programmatic Presentation

Entin (NASA HQ) The NASA Water Cycle Focus Area

10.20 - 10.40 Break

10.40 – 12.00 Science Presentations Water Cycle Emphasis (20 minutes each)

Fisher (UMCES) Responses of Coastal Waters to Terrestrial Inputs of Elemental CNP in Urbanizing Coastal Regions

Goetz (WHRC) Urban Growth Impacts on Surface Hydrology and Stream Ecology in Watersheds of the Mid-Atlantic and New England

Bounoua (NASA GSFC) Development and Validation of Process Algorithms of Urbanization for Water Cycle, Data Assimilation and Climate

Townsend (UW) Spatial Patterns of Forest Disturbance and Consequences for Regional Water Ouality

12.00 - 12.50 Lunch in Ft. McHenry Room, 1st Floor

12.50 – 1.50 Invited Poster Session, Rooms 1101 & 1109/1111

1.50 – 3.10 Programmatic Presentations (20 minutes each)

Covington (NASA GSFC) The Mid Decadal Global Land Survey Project: Phase 1 Covington (NASA GSFC) The Mid Decadal Global Land Survey Project: Phase 2 Grigsby (NASA HQ) The NASA-USGS Data Gap Study Irons (NASA GSFC) LDCM Status

3.10 – 5.20 Breakout Discussion Groups

- 1) Mid Decadal Global Land Survey (Goetz/Hansen) Room 1101
- 2) Land Measurement Teams Land Cover Products (Justice/Bounoua) Room 1109/1111

Day 2 Wednesday, October 11th, 9.00 – 5.00 General Session Room 1123

9.00 – 10.20 Science Presentations Water Cycle Emphasis (20 minutes each)

Hope (SDSU) Regional Hydrologic Response of Semi-Arid Mediterranean Climate Watersheds to Land-Cover/Land-Use Variability: Predictive Models Based on MODIS Products

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

Fox (EWC) The Role of Land-Cover Change in Montane Mainland Southeast Asia in Altering Regional Hydrological Processes Under a Changing Climate

Anderson (USDA) Multi-scale Remote Assessment of Land-Surface Hydrologic Response to Stress

10.20 - 10.40 Break

10.40 – 11.30 Breakout Groups Report Back and Discussion

- 1) Mid Decadal Global Land Survey (Goetz/Hansen)
- 2) Land Measurement Teams Land Cover Products (**Justice/Bounoua**)

11.30 – 12.30 Programmatic Presentations (20 minutes each)

Tupas (USDA) CCSP LULCC and LUIWG: Focus on Water Cycle

Friedl (NASA HQ) NASA Applications Related to Water Cycle

Questions to Program Managers (20 minutes)

12.30 - 1.30 Lunch in Ft. McHenry Room, 1st Floor

1.30 - 2.00

Margerin/Gubbels (SSAI) SAXTA Demo: A High Resolution Data Dissemination System

1.30 - 2.00 Invited Poster Session, Rooms 1101 & 1109/1111

2.00 – 2.20 Programmatic Presentation

Shiklomanov (UNH) Water Cycle Aspects of NEESPI

2.20 – 5.00 Science Presentations NEESPI Hydrology Emphasis (20 minutes each)

Henebry (**SDSU** – **sub for Gitelson**) 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

Aizen (UI) Estimation of Seasonal Snow Cover and Glacial Area Changes in Central Asia (Tien Shan) During the Last 50 Years Using NASA ESE Products and In-Situ Data **Henebry** (SDSU) Evaluating the Effects of Institutional Change on Regional Hydrometeorology: Assessing the Vulnerability of the Eurasian Semi-Arid Grain Belt

Zeng (UA) Relationship between Land Cover/Land Use Change and Surface Hydrology over Arid and Semiarid Regions

Chen (UT) Effects of Land Use Change on the Energy and Water Balance of the Semi-Arid Region of Inner Mongolia

Geerken (Yale) Ecological Monitoring in Semi-Arid Central and West Asia: Drivers and Trajectories

Shiklomanov (**UNH**) Role of Land Use/Land Cover Change in Water Budget and Water Use Across Central Asia: An Interactive Data Compendium for Hydrological Analysis

Day 3 Thursday, October 12th, 9.00 – 12.00 General Session Room 1123

9.00 – 10.40 Science Presentations Water Cycle Emphasis

Eshleman (UMd) Exacerbation of Flooding Responses Due to Land Cover/Land Use Change: A Comparative Study

Imhoff (NASA GSFC) Global Distribution of Human Appropriation of Fresh Water: An Earth Observation-supported Strategy Linking Biophysics and Socio-economics for Addressing Water Vulnerability

Beltran (UC-Boulder) Integrated Regional Climate Study with a Focus on the Land Use Land Cover Change and Associated Changes in Hydrological Cycles in the South Eastern United States

Brown (UM) Changing Responses of Land Dynamics and Vulnerability to Flooding Under Policy and Environmental Change near Poyang Lake, China

Coe (WHRC) Interactions of Edaphic and Land Use Factors on Water Budgets in Cerrado and Semi-Arid Caatinga Region of Brazil

10.40 - 11.00 Break

11.00 - 12.00 Concluding Remarks, Program Direction and Future Funding

Gutman (NASA HQ)/Justice (UMd) OPEN DISCUSSION

LUNCH in Mount Clare Café, 1st Floor

Poster Session (Posters will remain up for first two days ONLY in rooms 1101 & 1109/1111)

Bowling (Purdue) Poster 1: An Integrated Understanding of the Terrestrial Water and Energy Cycles Across the NEESPI Domain through Observations and Modeling

Poster 2: Multi-Sensor/Multi-Scale Assessment of Urban Impacts in the Great Lakes Region

Poster 3: Diagnosis and Prognosis of Changes in Lake and Wetland Extent on the Regional Carbon Balance of Northern Eurasia

Chen (UCAR) Atmospheric Responses to Land Surface Forcing and Their Impact on Precipitation Processes in the Southern Great Plains

Darmenova (**GA Tech**) Understanding the Role of Changes in Land-Use/Land-Cover and Atmospheric Dust Loading and Their Coupling on Climate Change in the NEESPI Study Domain Drylands

Fet (**MU**) ASTER Image Processing for Forestry Applications in Tien-Shan Mountains **Hansen** (**Montana**) Vulnerability of US National Parks to Land Use and Climate Change and Variability

Jasinksi (NASA GSFC) A Satellite-Derived Database of Vegetation Momentum Roughness for Global Hydrology and Climate Studies

Kling (ISU) Drivers of Land-Use/Land-Cover Change in Agricultural Areas: Climate and Land-Manager Choices

Lefebvre (WHRC) Integration of Land Use, Fire, and Carbon Flux in Critical Amazon Landscapes: The Xingu River Headwaters and the BR163 Highway Corridor

McDonald (NASA JPL) A Satellite-Based Landscape Surface Resistance Measurement for Improved Assessment of Land-Atmosphere Water and Energy Transfer

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

Nickeson (NASA GSFC) LPV Working Group

Ozdogan (NASA GSFC) Continental US Irrigated Area Mapping From MODIS and Ancillary Data

Peters-Lidard (NASA GSFC) NASA Model and Observation Products for the Study of Land Atmosphere Coupling and its Impact on Water and Energy Cycles

Rodell (NASA GSFC) Integration of Energy and Water Cycle Research Products in a Global Land Surface Modeling and Assimilation System

Romanov (NOAA) Continuous Fields of Snow Cover Characteristics Derived through Coupling Satellite Data with Snowpack Model: Application in the River Runoff Modeling over NEESPI Domain

Romanovsky (**UAF**) **Poster 1:** Permafrost Dynamics within the Northern Eurasia Region and Related Impacts on Surface and Sub-Surface Hydrology

Poster 2: Current Climate Changes over Eastern Siberia and Their Impact on Permafrost Landscapes, Ecosystem Dynamics, and Hydrological Regime

Velicogna (CU) The Eurasian Fresh Water Cycle from GRACE and In-situ Hydrologic Networks: Distinguishing Water Behavior in Permafrost and Non-permafrost Regions

Vinas (MSU) Giant Panda Habitat Dynamics (1994-2001) Inside and Outside Nature Reserves in the Qionglai Mountain Range, China

Walker (UAF) Application of Space-Based Technologies to Examine Land-Cover/Land-Use Change Along a Transect on the Yamal Peninsula and Novaya Zemlya, Russia

Wang (UC-Boulder) Continental-Scale Calibration of Surface Albedo in CSU Unified Land Surface Model Using Remote Sensing Data and Parameter Estimation Model Wolfe (NASA GSFC) MODIS Collection 5 Update