

Monitoring land cover and land use in boreal and temperate Europe

Atlantis Conference Center, Narva mnt.2, Tartu, Estonia

August 25-28, 2010

The Land-Cover/Land-Use Change (LCLUC) Science Team meeting will be held jointly with the GOF-C-GOLD Northern Eurasia Regional Information Network (NERIN) and the Northern Eurasia Earth Science Partnership Initiative (NEESPI) in Tartu, Estonia. The focus of this meeting is on monitoring processes related to land-cover and land-use change in boreal and temperate regions of central, eastern and northern Europe. Forests and other biomes in boreal and temperate zones comprise about a half of the world vegetation cover. To study processes in the boreal and temperate ecosystems as related to land-cover/land-use change- climate interactions, the workshop is organized around 4 themes: (1) Changes in ecosystems, their composition and structure; (2) Carbon Cycle; (3) Water Cycle; and (4) Human dimensions of land- cover and land-use change. The overall goal of the meeting is to review the availability of satellite data, products, approaches and concepts for land monitoring in boreal and temperate ecosystems of Europe. An additional focus for the workshop is the definition of requirements for land-cover and land-use characterization that address the needs of users in these regions and the community of scientists working on regional environmental issues.

Presentations and discussions will give an overview of recent research accomplishments and the state of the art in this research area, and formulate future research directions and applications development needs. The workshop will explore opportunities for coordination and collaboration among research teams and ongoing projects aimed to advance our understanding of ecosystem processes in boreal and temperate zones and their socioeconomic effects. Tartu Observatory (Tõravere, <http://www.aai.ee>) will host the meeting. The workshop will follow the Training Session on Quantitative research methods in Human Dimensions of Environmental Change within Eastern Europe which will take place in Valmiera, Latvia, August 21-23, 2010. The working language of the workshop and training session is English.

Meeting details can be found on the LCLUC Website: <http://lcluc.hq.nasa.gov>

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Wednesday August 25

8:30 Participant registration and poster set-up begins

Introductions and opening comments– Chair: Anu Reinart, Tartu Observatory

9:00 Welcome– Tõnis Lukas, Ministry of Education and Science

9:10 Meeting Objectives– Chris Justice, University of Maryland

International and National Program Presentations

9:20 NASA LCLUC Program and NEESPI Update– Garik Gutman, NASA

9:40 GOF-C-GOLD NERIN– Olga Krankina, Oregon State University

10:00 LCLUC-related projects at Tartu Observatory, Tõravere– Matti Mõttus, University of Helsinki

10:10 Coffee Break

10:30 The Baltic Sea Experiment: An environmental research network in the Baltic Sea drainage basin. Some research examples, Marcus Reckerman, International BALTEX Secretariat

11:00 Session 1: National Overviews on Land Cover Land Use in Boreal and Temperate Europe: projects, activities and organizations (15 minute presentations) – Chair: Olga Krankina

Estonia– Urmas Peterson, Tartu Observatory

Latvia– Ilmars Krampis, University of Latvia

Russia– Sergey Bartalev, Space Research Institute (IKI), Russian Academy of Sciences

Czech Republic– Premysl Stych, Charles University, Faculty of Science

Slovakia– Ivan Barka, Forest Research Institute, National Forest Centre

Other countries TBD

12:00 Lunch

13:00 Group Photo of meeting participants

13:15 National Overviews continued

14:40 Coffee Break

15:00 Synopsis of presentations with discussion– Chris Justice

16:00 End of Session- Tartu City Tour (Atlantis Conference Center- Front of Building)

18:00 Welcome Reception Tartu University Main Building (University Street 18)

20:00 End of Reception

Thursday, August 26

Session 2: Changes in Natural Ecosystems, Their Composition and Structure

Remote Sensing of Natural Ecosystems: Plenary presentations– Chair: Yuri Knyazikhin

9:00 Monitoring vegetation: theoretical basis– Tiit Nilson, Tartu Observatory

9:20 Overview of state-of-the-art methods and applications for boreal and temperate forest monitoring and availability of remote sensing data– Curtis Woodcock, Boston University

9:40 The Pan-European Forest Type Map 2006: Methodology, results and JRC LCLUC Efforts– Fernando Sedano, Joint Research Centre - European Commission

10:00 Field experiments in northern Europe–Terhikki Manninen, Finnish Meteorological Institute

10:20 Poster Session and coffee

Poster Session Topic: Remote Sensing of natural ecosystems– Chair: Yuri Knyazikhin

11:20 Synopsis of posters and presentations with discussion– Chair: Christopher Justice

12:20 Lunch

Session 3: Biogeochemical and Water Cycles– Chair: Olga Krankina

13:20 Overview of modeling forest productivity and carbon cycling under climate change– Olga Krankina, Oregon State University; Pekka Kauppi, University of Helsinki

13:40 Monitoring water quality in the Baltic region, Anu Reinart, Tartu Observatory

14:00 Water resources of boreal-temperate Russia: Contemporary status and future projections on the interaction of water and carbon cycles– Alexander Shiklomanov, University of New Hampshire

14:20 Poster Session and coffee

Poster Session Topic: Biogeochemical and hydrological cycles– Chair: Olga Krankina

15:20 Synopsis of posters and presentations with discussion – Chairs: Olga Krankina and Alexander Shiklomanov

16:20 End of Session

18:30 Dinner Sponsored by Scanex (University History Museum Toome Hill)

Friday, August 27 (Day 3)

9:00 Field Trip: Demonstration and discussion of different types of land use in North-eastern Estonia – Departure: 8:45 Hansahotell; 9:00 in front of Vanemuine theatre, city center.

19:30 End of Field Trip

Saturday, August 28

Session 4: Human Dimensions of LCLUC– Chairs: Kirsten DeBeurs, Virginia Polytechnic

Institute and State University and Tobias Kuemmerle, University of Wisconsin-Madison

9:00 Socio-economic transformations and land use change: patterns and processes of land use change in Central and Eastern Europe – Tobias Kuemmerle

9:20 Overview of forest exploitation in Baltics – Pekka Kauppi

9:40 Overview of forest exploitation in northwestern Russia– Alexander Maslov, ScanEx Research and Development Center, Institute of Forest Science RAS

10:00 Relating aggregated social/economic data to pixel-level remote sensing in Eastern Europe– Gregory Taff, The University of Memphis

10:20 Multi scale trend analysis for evaluating climatic and anthropogenic effects on the vegetated land surface in Russia. – Kirsten DeBeurs

10:40 Poster Session and coffee

Poster Session Topic: Human dimensions of LCLUC

11:40 Synopsis of posters and presentations with discussion– Chairs: Gregory Taff and Tobias Kuemmerle

12:40 Lunch

Session 5: Concluding Session– Chair: Curtis Woodcock

13:40 Education component of LCLUC program, Greg Taff

14:10 Overview of university programs on land remote sensing in the Baltic States, Mart Noorma, University of Tartu and Tartu Observatory

14:40 Coffee

Panel on Regional Research Priorities– Coordinator: Olga Krankina

15:00 Five minute comments from a panel of regional experts

16:00 Wrap up and Summary Presentation on future plans and funding opportunities– Garik Gutman

16:30 Close of Workshop