

**Global Sustainable Bioenergy (GSB) Workshop,
Future Research Directions for Global Sustainable Bioenergy
June 12-13, 2013, Oak Ridge National Laboratory (ORNL), Tennessee USA**

Thanks to Sao Paulo Research Foundation (FAPESP) and ORNL for enabling this workshop and to Penn State University, Dartmouth College, Imperial College London, University of Minnesota and all participants. Special thanks to organizers Maggie Davis, Tatia Harris, Keith Kline and Lee Lynd.

Meeting objectives with emphasis on geospatial analysis, data and modeling

- 1) Familiarize ORNL and GSB researchers with each other's activities, capabilities, and plans to help identify possible future or expanded collaborations.
- 2) Input and discussion on the relationship between geospatial analysis and other parts of the GSB and LACAf projects, and in particular the newly-initiated FAPESP/NEPAD collaboration.
- 3) Final polishing of the FAPESP proposal to support geospatial analysis and modeling tasks of the GSB.

Participants

Group 1. Attendance in person confirmed, June 12-13

Edgar Beauclair- Department of Agriculture, ESALQ/USP
Heitor Cantarella- Soils and Environmental Resources Center, IAC
Virginia Dale - Environmental Sciences Division, ORNL
Maggie Davis- Environmental Sciences Division, ORNL
Luiz Horta- Institute of Natural Resources, UNIFEI
Helio Joris - Soils and Environmental Resources Center, IAC
Shujiang Kang- Environmental Sciences Division, ORNL
Nicole Kalas- Centre for Environmental Policy, Imperial College London
Keith Kline- Environmental Sciences Division, ORNL
Lee Lynd- Thayer School of Engineering, Dartmouth
Sujith Nair- Environmental Sciences Division, ORNL
'Debo Oladosu - Environmental Sciences Division, ORNL
Esther Parish- Environmental Sciences Division, ORNL
Virginia Pravia- Institutes of Energy and the Environment, Penn State University
Amanda Ramcharan- Institutes of Energy and the Environment, Penn State University
James Roberto - Associate Laboratory Director for Science and Technology Partnerships, ORNL
Jansle Rocha- Laboratory of Geoprocessing, UNICAMP
André Santanchè- Department of Information Systems, UNICAMP
John Sheehan- Institute on the Environment, University of Minnesota
Nagendra Singh - Computational Sciences & Engineering Division, ORNL
Erica Swithwicks- Institutes of Energy and the Environment, Penn State University
Jeremy Woods- Centre for Environmental Policy, Imperial College London

Group 2. Invited video-conference participants, June 13 (feel free to extend invitations to others)

Annie Chimphango, Department of Process Engineering, Stellenbosch University
Luis Cortez- Department of Agricultural Engineering, UNICAMP
Brito Cruz - São Paulo Research Foundation (FAPESP)
Andre Furtado- Institute of Geosciences, UNICAMP
Regis Leal – Sustainability Program, Brazilian Bioethanol Science and Technology Laboratory (CTBE)
Ibrahim Mayaki - The New Partnership for Africa's Development (NEPAD)
Mosad El-Missiry - Regional Integration and Infrastructure, NEPAD (Africa)
Patricia Osseweijer - B-Basic, Delft University of Technology
Emile van Zyl - Department of Microbiology, Stellenbosch University
Gideon Wolfaardt, Water Institute, Stellenbosch University

Draft Schedule (small changes likely, all times eastern daylight time-EDT)

June 12th, 2013. ORNL (Building 1520, Beech River)

7:45 Departure from Comfort Inn and Suites & Double Tree, Oak Ridge
8:30 to 9:00 Badging at ORNL visitors center and transition to meeting space
9:00 to 9:15 Welcome, Introductions, Goals of Meeting. (Davis)
9:15 to 9:30 Overview of relevant facilities, resources at ORNL (James B. Roberto)
9:30 to 9:45 Lee Lynd: GSB overview
9:45 to 10:05 Keith Kline: Land and resource assessment challenges and opportunities
10:05 to 10:25 'Debo Oladosu: Economic modeling opportunities
10:25 to 10:40 Shujiang Kang: Modeling -bioenergy biomass assessment & environmental analysis
10:40 Break
11:10 to 11:30 Nagendra Singh: GIS research capabilities/contributions
11:30 to 11:50 Virginia Dale: Sustainability Indicators
11:50 to 12:10 John Sheehan: Global Pasture
12:10 to 12:30 Edgar Beauclair: Sugarcane (Brazil and LACAf/GSB)
12:30 to 12:50 Heitor Cantarella: Nutrient requirements for sustainable biofuel feedstock production
12:50 to 14:00 Lunch (in 1520) and discussions
14:00 Jem Woods: Decision-making criteria for policy makers; how GSB's geospatial analysis can help
14:20 Horta: Integrated Analysis
14:40 André Santanchè: E-science and Geospatial Database
15:00 Guidance and organization into small groups: Breakout discussions & brainstorming
16:00 Report out, group discussion
17:00 Adjourn – Reception to follow off-site (hosted by Virginia Dale)

June 13th, 2013. ORNL (Building 1520, Beech River)

Video Conference, attended in person by Group 1, remotely by Group 2 (9am-12pm), to achieve goals 2 & 3

8:00 Departure from Comfort Inn and Suites & Double Tree, Oak Ridge
8:30 to 9:00 Audiovisual check and troubleshoot
9:00 to 9:20 Welcome, overview, and objectives. Lee
9:20 to 9:40 Geospatial analysis and modeling. Jansle Rocha
9:40-10:00 NEPAD/FAPESP Collaboration. Mosad& Emile
10:00-10:45 Brainstorm discussion – Geospatial analysis and the FAPESP/NEPAD collaboration

Short break for all 10:45-11:00

11:00 to 12:00 Overview and updates (narrative or with visual aids, need not all be the same)
Social. Andre Furtado
Environmental. Lee Lynd to lead discussion in Martinelli's absence
LACAF I. Cortez & Horta

12:00 Teleconference adjourn (discussions to continue for those present in person)
12:00 to 1:00 Lunch/discussions (Lunch on your own; Options: ORNL cafeteria or sandwich shop in 1520)
1:00 to 2:30 Discussion of feedback received, completing & submitting geospatial proposal, other business.
2:30 Adjourn. (Several flights expected to leave TYS at approximately 5:30)

Contact information:

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