

## Agenda

### PROSPECTS AND PRIORITIES FOR SATELLITE MONITORING OF GLOBAL TERRESTRIAL BIODIVERSITY

#### Working Group Meeting 2: Key characteristics of a global biodiversity observation system

**Working group leaders:** Frank Davis (NCEAS), Dave Schimel (JPL), Ryan Pavlick (JPL), Mark Schildhauer (NCEAS)

**When:** June 29 – July 1, 2015

**Where:** National Center for Ecological Analysis and Synthesis. 735 State Street, Suite 300, Santa Barbara, CA.

#### Meeting Objectives:

- Finalize submission draft of *Science* Perspectives paper, "Biodiversity from Space;"
- Learn from ongoing case studies about the potential for linking imagery, trait data, phylogenetic data, and regional floristic information for global biodiversity research, assessment and monitoring;
- Collaborate on a manuscript laying out key characteristics of a space mission for biodiversity science
- Discuss research and training needs and priorities for advancing satellite monitoring of global terrestrial biodiversity.

#### Meeting structure

During the first day we will review key ideas that emerged from the December 2014 meeting at NCEAS (see materials on the project redmine site, <https://projects.nceas.ucsb.edu/nceas/projects/remote-sensing-of-global-biodiversity>), review and discuss results of ongoing case studies, and identify some focal science and policy questions and challenges. NCEAS will host a mixer with resident scientists before a group dinner in Santa Barbara.

During the second day we will discuss the *Science* Perspective draft manuscript, and workflow and informatics considerations for global biodiversity monitoring. We will then turn to a discussion of essential characteristics of a space mission for global biodiversity research and management of ecosystem services. Before adjourning for the day we will outline and begin work on a manuscript that conceptualizes such a mission. The group will meet for dinner in Santa Barbara.

Day 3 will be devoted to discussion of research and training needs. We will continue working on the manuscript as time allows.

## **Monday, June 29**

- 9:00 – 9:15 Welcome (FD, DS) and introductions (All). Overview of meeting objectives. Review of agenda.
- 9:15 – 10:15 Review of findings from the December 2014 meeting (DS)
- 10:15 – 10:30 Break
- 10:45 – 12:00 Case Study 1 and Discussion (Michael Schaepman)
- 12:00 – 1:00 Lunch
- 1:00 – 2:15 Case Study 2 and Discussion (Greg Asner)
- 2:15 – 4:00 Topical Breakout Groups
1. Focal research questions in global ecology and biogeography
  2. Focal questions and information needs for biodiversity policy and management
- 4:00 – 4:45 Breakout group report; identification of key research questions and information needs
- 4:45 – 6:00 PM Reception (NCEAS)
- 7 PM Dinner (Location TBD)

## **Tuesday June 30**

- 9:00 – 9:15 Review of the day's agenda and objectives
- 9:15 – 10:15 Discussion of *Science* Perspectives manuscript
- 10:15 - 10:30 Break
- 10:30 – 12:15 Topical Breakout Groups
1. Detailed workflow for biodiversity mapping with imagery, trait data, phylogeny data, and ancillary information
  2. Informatics and open science considerations
- 12:15 – 1:15 Break for lunch
- 1:15 – 1:45 Breakout Group Reports
- 1:45 – 3:00 Topical Breakout Groups
1. Key characteristics of a space mission for biodiversity science
  2. Key characteristics of a space mission for biodiversity policy
- 3:00– 3:15 Break
- 3:15 – 3:45 Synthesis of breakout group discussions
- 3:45 – 5:00 Outline manuscript on a space mission for biodiversity science; breakout writing groups
- 6:30 Dinner (Location TBD)

## **Wednesday, July 1**

- 9:00 – 11:00 Research and training needs
- 10:00 – 12:30 Revisit manuscript, continue drafting sections as time allows
- Lunch and Adjoin