

The Science Definition Team SDT for the Arctic-Boreal Vulnerability Experiment (ABoVE) met for the first time on May 1-2, 2013, in La Jolla, CA.

The ABoVE SDT is responsible for developing a *Concise Experiment Plan* for this next Terrestrial Ecology field campaign.

The ABoVE SDT will:

- Refine the science questions to be addressed
- Provide a compelling rationale for the scientific and societal importance of the study
- Define the research approach/strategy
- Provide a reasonably detailed study design and description of required field and remote sensing observations, field infrastructure, logistics, and data management capabilities





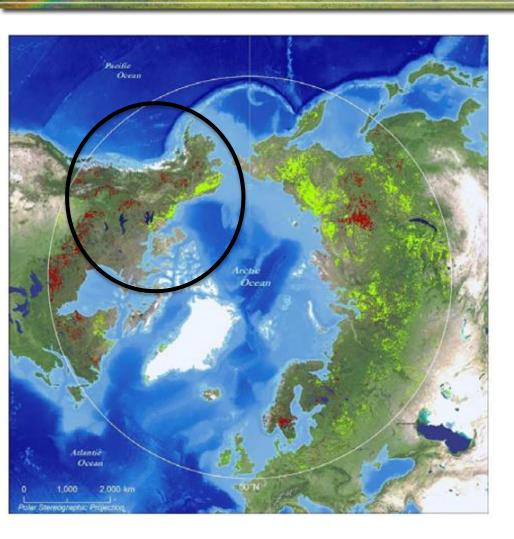
The objectives for the meeting were:

- *Beginning to refine the primary science question(s) for ABoVE (from the perspectives of both ecosystem science and societal impacts)
- Organizing the work of the SDT to prepare for developing all components of the ABoVE Concise Experiment Plan

Chief results of the meeting:

- A conceptual "Vulnerability Framework" for ABoVE science (including a first draft concept diagram)
- A first draft overarching science question:
 - How vulnerable and resilient are ecosystems and society to environmental change in Arctic and boreal regions?
- Identification of key ecosystem services that would be addressed in ABoVE
- ❖ Tasking of subgroups of the SDT to:
 - Write text to document the vulnerability framework and science questions
 - *Explore the opportunities and constraints that will affect the ABoVE field campaign study design and become familiar with available information.

For Experiment



Remote sensing data will be essential for ABoVE.

- Improved maps of key characteristics of the land, ocean and atmosphere
- Providing a means to monitor and analyze variations over time
- Tools for spatial and temporal extrapolation and scaling
- Input data for models



SDT Members

Billings, Sharon - U. of Kansas **Boelman, Natalie - Columbia U.** Colt, Stephen - U. of Alaska, Anchorage Fisher, Joshua - Jet Propulsion Lab **Goetz, Scott - Woods Hole Research** Center **Grosse, Guido - U. of Alaska, Fairbanks** Hall, Forrest - U. of Maryland, Baltimore County **Harriss, Robert - Houston Advanced Research Center** Hayes, Daniel (Co-Chair) - Oak Ridge **National Lab Karchut, Jeremy - National Park Service** Kasischke, Eric (Co-Chair) - U. of Maryland

Mack, Michelle - U. of Florida McGuire, A. David - U.S. Geological Survey Metsaranta, Juha - Natural Resources Canada Miller, Charles - Jet Propulsion Lab Rawlins, Michael - U. of Massachusetts, **Amherst** Streigl, Rob - U.S. Geological Survey Sturm, Matthew - U. of Alaska, **Fairbanks** Sweeney, Colm - National Oceanic and **Atmospheric Administration** Varner, Ruth – U. of New Hampshire Wullschleger, Stan - Oak Ridge National Lab