Webinar Summary Report: Land Cover and Land Use Change Chapter

Introduction

The Fourth National Climate Assessment (NCA4), currently in development, will assess the science of climate change and its impacts across the United States. It will document climate change-related impacts and responses for various sectors and regions, with the goal of better informing public and private decision-making at all levels.

To ensure that the assessment is informed by and useful to stakeholders, engagement activities were planned for many of the 17 National Chapters. These activities provided stakeholders an opportunity to provide input to and exchange ideas with the chapter author team on key message formulation, share relevant resources, and give individual feedback on issues of importance to the chapter topic.

Webinar Structure

National chapter webinars were organized and hosted by the coordinating lead authors (CLA) and chapter leads (CL) with coordination from NCA4 staff from the U.S. Global Change Research Program (USGCRP). Invitations to the webinars were distributed by the hosts, author team, and USGCRP staff to their stakeholder networks.

Land Cover and Land Use Change Engagement Webinar

On June 1, 2017, the NCA4 Land Cover and Land Use Change chapter team held a public engagement webinar. The objectives of the webinar were to gather input from stakeholders, including authors of the regional chapters, to help inform the writing and development of NCA4 and to raise awareness of the process and timeline for NCA4.

Chapter Author Team

Tom Loveland, U.S. Geological Survey (Coordinating Lead Author)
Ben Sleeter, U.S. Geological Survey (Chapter Lead)
Grant Domke, U.S. Forest Service
Jim Wickham, U.S. Environmental Protection Agency
Nate Herold, National Oceanic and Atmospheric Administration
Nate Wood, U.S. Geological Survey

USGCRP Staff:
Chris Avery, NCA4 Senior Manager
Susan Aragon-Long, USGS Liaison to USGCRP/NCA Senior Scientist
Kristin Lewis, NCA Senior Scientist

Overview

Chris Avery opened the webinar by giving an overview of USGCRP, the structure of NCA4, and the timeline for report completion. He also discussed a number of ways for interested parties to engage in the NCA4 process. Ben Sleeter then provided an overview of the proposed scope of the NCA4 Land Cover and Land Use Change chapter including: (1) background and context; (2) land change drivers; (3) state of the sector/projections; and (4) Key Messages. Ben also discussed the process for developing the chapter and the current status of the chapter. A question & answer period followed, with specific questions regarding wind farms and land use and forest clearcutting and land use.

Topics Addressed & Suggested for Inclusion:

Land Change Drivers

- Population and economics
- Federal policies
- Technological innovation
- Biophysical processes

Climate Mitigation and Adaptation

- Low emission scenarios often do not correlate to low land use change, in fact, for Representative Concentration Pathways (RCP) there is something of an inverse relationship. This factor is in contrast to the Special Report on Emissions Scenarios (SRES) where the most environmentally-friendly scenario (B1) was generally associated with low rates of land use intensification.

State of the Sector

- Remote sensing approaches to map land cover and detect changes.
- USGS Land Cover Trends: 1973-2000; 6-8 year intervals; ecoregions.
- National Land Cover Database (NLCD): 2001, 2006, 2011; spatially explicit.
- NOAA Coastal Change Analysis Program (C-CAP): same as NLCD; more detail in coastal environments/wetlands.
- Monitoring Trends in Burn Severity (MTBS): Annual fire maps (1985-2014) .
- North American Forest Dynamics: Annual forest disturbance (1985-2010).
- Land use
    - National Land Use Dataset (Theobald): remote sensing + inventory data.