

Workshop on Land Use/Land Cover Change Scenarios and Projections for the United States

June 25-27, 2014 | Rockville, MD

Hosted by the US Global Change Research Program
(USGCRP) Working Group on Scenarios and
Interpretive Science



United States
Global Change
Research Program



Who are we?

USGCRP Scenarios and Integrative Science Working Group

- Susan Aragon-Long, USGCRP
- Virginia Burkett, USGS
- Alison Delgado, USGCRP
- Dave Easterling NOAA
- Anne Grambsch, EPA
- John Hall, DOD
- Linda Langner, USDA Forest Service
- Allison Leidner, NASA
- Fred Lipschultz, USCRP
- Bob Vallario, DOE
- Chris Weaver, USGCRP



The “Scenarios Group” Mission

“Building the foundations for a coordinated U.S. scenario science enterprise to respond to shared agency information needs for quantitative and qualitative scenario-related products aligned around regions, sectors, systems, and topics over spatial and temporal scales of interest ”



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- Advancing collaborative science on critical gaps
- Enhancing methodologies for use-inspired scenario development, risk framing, and contextual interpretation
- Developing the next generation scenario work products for model inter-comparisons, assessments, and analyses
- Improving interagency communications, coordination, and accessibility to knowledge, work products, and technical resources



Advancing collaborative science on critical gaps

- Advance the foundational science and the corresponding data products and tools for global change scenario development and use.
- Synthesize and incorporate new understanding of societal (e.g., economic development, human behavior, technology evolution, engineered systems) and broader environmental research into a more expansive set of scenarios while continuing to improve physical climate scenarios.
- Support and forge collaborations with other key USCGRP elements to improve modeling and integrated analysis, robust risk framing, and uncertainty characterization centered around scenarios and scenario development (e.g., IGIM and INCA).

Enhancing methodologies for use-inspired scenario development, risk framing, and contextual interpretation

- Improve understanding of agency and other major use-inspired needs aligned by spatial scales and geographic regions, sectors, systems, topics, and time horizons of critical interest.
- Develop and test broadly applicable scenarios methodologies for translating USGCRP research into contextually relevant scientific information, including risk framing and uncertainty characterization for agencies and other major users.
- Target methodologies and develop guidance around critical multi-scale challenges where scenario information at defined spatial and temporal scales inform and are informed by adjacent scales (e.g., nested scenarios).
- Ensure that user feedback and evaluation is continuously incorporated into improvements of the methodologies.

Developing the next generation scenario work products for model inter-comparisons, assessments, and analyses

- Develop targeted scenarios and scenario products for and influenced by major inter-agency, coordinated uses such as the NCA, IPCC, and CMIP.
- Provide broadly applicable scenario work products and capabilities that respond to ongoing agency needs and potentially broader, major uses for research, assessments, and decision support at sub-national, national, and international scales.



Near-Term Focus Areas

- 1) Human Dimensions (strong push)
 - Land use/land cover change (June workshop)
 - Population/migration and, later (June workshop)
 - Regional economics

- 2) Climate/environmental systems (coordination)
 - Regional climate outlooks
 - Regional sea level rise (DOD)

- 3) Scenarios for CMIP 6 and nesting/boundary issues for U.S. scenarios activities
 - RCPs and Shared Socioeconomic Pathways
 - Other issues and summer workshop series

- 4) Fundamental methodologies, interpretation, risk-based framing and contextual basis



Why are we here?

Vision: Catalyze and launch an interagency process to develop consistent LULCC scenarios that could be customized by agencies and external stakeholders to meet their specific needs.

Purpose: Allow for a more consistent analysis of LULCC impacts across agency modeling and analysis.

We need your input on:

- Drivers of LULCC change
- Scenario Design (construction across multiple scales, what might scenarios and narratives look like)
- Scenario needs (data, software, models, analysis for developing scenarios)
- Next steps



Thank you!

Federal Coordinating Group (FCG)

- Britta Bierwagen, EPA
- Alison Delgado, USGCRP
- Dave Easterling NOAA
- John Hall, DOD
- Linda Langner, USDA Forest Service
- Allison Leidner, NASA
- Brad Reed, USGS

Science Steering Group (SSG)

- Dan Brown, Co-chair, University of Michigan
- Richard Moss, Co-Chair, Joint Global Change Research Institute
- Budhendra Bhaduri, Oak Ridge National Laboratory
- Chris Justice, University of Maryland
- Marc Levy, Columbia University
- Ruben Lubowski, Environmental Defense Fund
- Ben Sleeter, USGS
- Allison Thomson, Joint Global Change Research Institute
- Dave Wear, USDA Forest Service

And: Alison Delgado, Susan Aragon-Long, Andrew Flatness