

Integrated Impacts and Scenarios

Kate Calvin, Richard Moss, Jean-Francois Lamarque, Mike Mastrandrea, Chris Weaver, John Weyant

Objectives

- Advance the science of modeling climate change impacts by focusing on key challenges in different sectors. The goal is not a comprehensive review of modeling impacts, but rather a deep dive in a few specific areas.
- Facilitate interactions and understanding across research communities.
- Review and assess experience with current state of the art approaches to integrated scenario development, impacts assessment, and uncertainty analysis.
- Develop recommendations for future integrative analysis by individual modeling teams and the community as a whole. Both scientific understanding and policy (including information on research priorities) needs for scientific information will be considered.

Three Challenges

- **AGRICULTURE:** the effect of climate change extremes on agriculture
- **ENERGY:** the effect climate change on electricity supply
- **WATER:** the effect of regulation on the ability to adapt to climate change

Format

- Tuesday AM: Stage Setting
 - Future directions for various impacts assessments
 - Issues that are relevant to all impact sectors
- Tuesday PM, Wednesday AM, Wednesday PM
 - Deep dives on key challenges in three impacts sectors (agriculture, water, energy)
 - Each session has an overview of the sector, as well as talks from the climate modeling, impacts sector modeling, and integrated assessment modeling communities
 - Each session ends with an hour discussion. We've identified discussants from different communities to reflect on what was said and add anything that was missed.

Format (continued)

- Thursday AM: Cross-sectoral issues
 - Panel and discussion focused on linkages among sectors, including the three sectors discussed on Tuesday and Wednesday, as well as three additional sectors (energy demand, health, sea level rise)
- Thursday PM: Uncertainty
 - Two talks and discussion on ways of thinking about uncertainty, including whether or not to provide probabilistic information on scenarios

Format (continued)

- Friday AM: Wrap-Up
 - Panel on research needs and opportunities
 - Panel of scientists
 - Ideas for next year
- Special Guest Stars
 - Gary Geernaert, USGCRP perspectives, Wed AM
 - Jim Sweeney, Energy efficiency, Thurs PM

Ideas for Next Year

- Friday afternoon we will have a session to discuss next steps ideas for next year with respect to **climate change impacts and integrated assessment**. We'd like to get feedback on:
 - What questions are interesting to you?
 - What don't we understand?
 - What feedbacks should we explore?
- We invite all participants to give a **two minute** proposal in this session. If you'd like to do so, please send me an e-mail (katherine.calvin@pnnl.gov) by **Thursday afternoon**.