

# Climate Research Roadmap

# Roadmap recommendations

- BOSC EC Recommendations for Climate Roadmap
  - Describe how planned research will inform future EPA decision making
  - Describe more clearly the ORD climate change research niche (“actionable science” and its plan to work with other international and federal partners to ensure EPA’s science needs are met)
  - Improve the presentation and flow of the climate change roadmap
  - Identify research priorities associated with the problem statement
  - Expand the roadmap discussion of “Research gaps and priority research needs” (social sciences, uncertainties, decision-relevant scale, and synthesis)
  - Provide a discussion of how the roadmap will be used to guide research
- Response: Completely re-write Roadmap to address comments in a comprehensive way

# Science challenges

- Roadmap re-organized around three science challenges to provide actionable science in response to EPA partner needs:
  - Develop the knowledge base to support the Partner Offices to meet EPA's mission in the face of non-stationarity in the climate system (*adaptation*)
  - Inform the development, implementation, and benefits assessment of GHG control regulations (*mitigation*)
  - Identify and evaluate long-term, sustainable solutions for both the causes and consequences of climate change (*sustainability*)

# Guiding principles for future directions

- Presents principles that place current research efforts in the context of the continuing evolution toward a wholly integrated effort that :
  - Is predicated on a systems science approach that prioritizes cross-media, cross-scale, and cross-disciplinary research
  - Explicitly considers the social dimensions of change, both as part of the fundamental nature of climate change and as an essential element for moving the results of that science into action.
  - Focuses ultimately on solutions to the threat climate change poses to EPA's mission and to society, moving from the current focus on risk identification and characterization to the science needed to support responses.

# Informing decisions

- The Climate Roadmap provides a foundation for the dynamic interactions between ORD and our EPA partners that inform EPA decisions
- Partner Alliance and Coordination Teams (PACTs) serve as the venues for discussions of needs, results, and interpretation
  - Climate-related PACT members represent ACE, partners, and other ORD programs
- The Roadmap and PACTs guide development of EPA perspectives on research needs communicated to other agencies through USGCRP and other interagency bodies