



SPARC overview and highlights

- Each day, in the face of deep uncertainty, millions of decisions are made that respond to and influence the behavior of climate. How does the nation's multi-billion dollar investment in climate research affect those decisions? How can the societal value of this scientific investment be enhanced?

SPARC Project

- Funded by National Science Foundation as part of “Decision making under uncertainty” component
- Roger Pielke Jr., Dan Sarewitz, PIs (+other coIs)
- 5-year project, US \$2.4M total, Started 9/04
- Years 1-2, case studies described this meeting
- Years 3-5, apply methods to Climate Change Science Program as a whole

SPARC Goal

SPARC will conduct research and assessments, outreach, and education aimed at helping climate science policies better support climate-related decision making in the face of fundamental and often irreducible uncertainties.



What is Climate Science Policy?

- Two interrelated aspects:
 - Broader societal context under which climate science is justified and conducted
 - E.g. X science will solve Y problem
 - Specific decision processes that govern the climate research enterprise
 - E.g. NASA (U.S. space agency) decides to fund Z satellite in support of X science

What is Climate-Related Decision Making?

- Decisions made in response to the problems society faces as a result of climate (whether variability or change)
 - E.g. Planning for water shortages, heat waves, extreme cold winters, or mitigation of GHG emissions



What is the connection between the two?

- In the U.S., a program of scientific research on climate has been funded for more than 15 years to provide “usable information on which to base policy decisions relating to global change.”
- In other words, one of the major societal responses to climate-related problems has been to fund scientific research, in the hope that it will support decision making.

Driving Question:

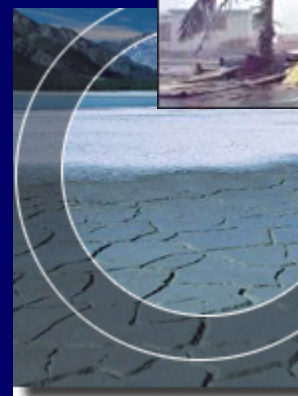
In this context, how do we know what science is “the right science” to do to address societal problems, and how do we make that science “usable”?

SPARC components

- Research
 - Sensitivity Analysis
 - Reconciling Supply and Demand
 - Cross-cutting activities
- Outreach
- Education (mainly leveraging)

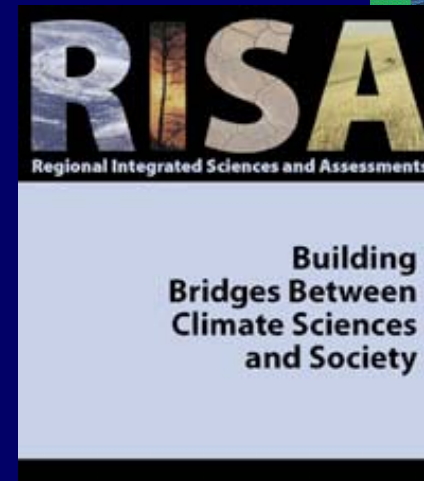
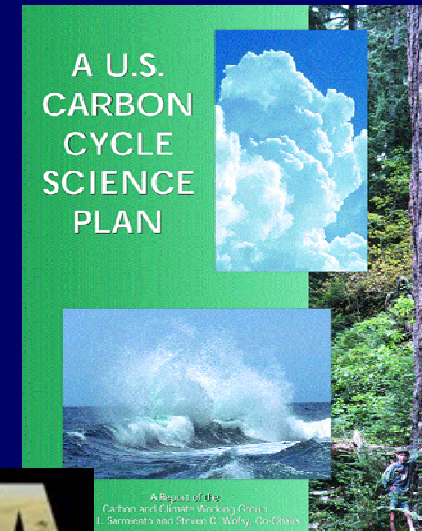
SPARC: Sensitivity Analysis

- Ecosystem function (Dan)
 - investigate the relative magnitude of various causes of environmental change
- Extreme events (Roger)
 - investigate the relative magnitude of various causes of the growing societal impacts of weather and climate extremes



SPARC: Reconciling Supply and Demand

- Carbon cycle science (Lisa)
 - Improve the ability of supply to meet demand by developing practical ways for setting priorities, directing science activities and building institutional capability
- Regional Integrated Sciences and Assessment (RISA) (Roger)
 - Harvesting lessons from a program deliberately aimed at connecting decision making needs with the research prioritization process



Outreach (Ami)

- Website
- Events and workshops
- Special sessions
- Listserve?
- Newsletters?

Year 1 highlights

- SPARC website
- Carbon RSD workshop
- RISA RSD workshop
- New personnel (Netra, Mark, Ryan, others?)
- Numerous talks, including special session at Human Dimensions meeting in Bonn (McNie)
- Publications in the pipeline (special issue in ESP, others?)
- Workshop next year in Munich on "Climate Change and Disaster losses"

SPARC Partners

- University of Colorado, Boulder (Co-PI)
- Arizona State University (Co-PI)
- Colorado State University
- American Meteorological Society
- Colorado School of Mines
- Swedish Institute for Climate Science and Policy Research



Emerging
Partners in:
-China
-Germany