

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

**Developing a Research Agenda and Research Governance Approaches for
Climate Intervention Strategies that Reflect Sunlight to Cool Earth**

Workshop: September 10-12, 2019

Stanford University
The Ruth Watis Mitchell Earth Sciences Building
Hartley Conference Center
390 Panama Mall Stanford, CA 94305

AGENDA

The goal of this workshop is to gather a broad array of information and perspectives on the governance of research for solar climate intervention strategies (specifically, stratospheric aerosol injection, marine cloud brightening, and cirrus cloud thinning).

Tuesday, September 10, 2019

8:30 A.M. *Breakfast*

9:00 A.M. **Introductions and Goals of the Workshop** Chris Field, Stanford University
Committee Chair

9:15 A.M. **The Roles of Research Governance** Hank Greely*
Stanford University Law School

To provide an overview of the history and aims of research governance in terms of oversight (e.g., limiting, evaluating, etc.); protection (of research subjects, the environment, etc.); coordination of research; ensuring transparency in research; etc.

9:35 A.M. **Discussion**

10:00 A.M. **SESSION 1: Foundational Questions**

Moderator: Marion Hourdequin,* Colorado College

Panelists:

- Ted Parson, University of California, Los Angeles School of Law
- Sheila Jasanoff, Harvard Kennedy School [*remote*]
- Stephen Gardiner, University of Washington

11:00 A.M. *Break*

11:30 A.M. **Discussion of Session 1**

12:15 P.M.

Lunch

1:15 P.M.

SESSION 2: Engagement and Representation in Solar Climate Intervention Research

Moderator: Ambuj Sagar,* Indian Institute of Technology, Delhi

Panelists:

- Nick Pidgeon, Cardiff University *[remote]*
- Gary Gardner, GreenFaith
- Holly Buck, University of California, Los Angeles
- Wylie Carr, U.S. Fish and Wildlife Service
- Andy Parker, Solar Radiation Management Governance Initiative (SRMGI)
- Drew Endy, Stanford University

2:30 P.M.

Discussion of Session 2

3:15 P.M.

Break

3:45 P.M.

SESSION 3: Governing Research for Collective Benefit: Minimizing the Chances of Unintended Impacts while Promoting the Collective Benefit for Humankind and the Environment

Moderator: Kate Ricke,* University of California, San Diego

Panelists:

- Steve Rayner, University of Oxford *[remote]*
- David Santillo, Greenpeace International *[remote]*
- Robert Lempert, Rand Corporation
- Sikina Jinnah, University of California, Santa Cruz
- Jonathan Pershing, William and Flora Hewlett Foundation

4:45 P.M.

Discussion of Session 3

5:30 P.M.

Adjourn/Reception

Wednesday, September 11, 2019

8:30 A.M. *Breakfast*

9:00 A.M. **Goals for day's Sessions**

Chris Field, *Committee Chair*
Stanford University

9:15 A.M. **SESSION 4: Perspectives on Existing and Potential Governance Frameworks for Solar Climate Intervention Research**

Moderator: Al Lin,* University of California, Davis School of Law

Panelists:

- Louise Bedsworth, California Strategic Growth Council
- Daniel Bodansky, Arizona State University
- Joshua Horton, Harvard University
- Tracy Hester, University of Houston Law Center

10:15 A.M. **Discussion of Session 4**

11:00 A.M. *Break*

11:30 A.M. **SESSION 5: Lessons Learned from the Governance of Research in Other Fields**

Moderator: Peter Frumhoff,* Union of Concerned Scientists

Panelists:

- Alta Charo, University of Wisconsin, School of Law
- Alex Wellerstein, Stevens Institute of Technology
- Lisa Levin, Scripps Institution of Oceanography [*remote*]
- Deneb Karentz, University of San Francisco
- Stuart Russell, University of California, Berkeley

12:30 P.M. *Lunch*

1:30 P.M. **Discussion of Session 5**

2:15 P.M. **Roundtable Discussion with all Session Panelists**

Chris Field, *Committee Chair*
Stanford University

- What have we learned? What are the strengths and limitations of the various governance approaches discussed over the course of the workshop? What stand out as the most promising approaches, and why?
- What further research is needed to understand governance issues and to develop more refined approaches to governance of SCI in relation to various stages of research, development, and possible deployment?

3:00 P.M. *Workshop Adjourns*