GOVERNANCE OF THE DEPLOYMENT OF SOLAR GEOENGINEERING

Research Workshop Conducted by the Harvard Project on Climate Agreements

With the support of – and in collaboration with
Harvard's Solar Geoengineering Research Program

September 27 – 28, 2018
Harvard Kennedy School
Cambridge, Massachusetts, USA

Map of Harvard Kennedy School Campus

GOVERNANCE OF THE DEPLOYMENT OF SOLAR GEOENGINEERING

Purpose, Motivation, and Scope

Some types of solar geoengineering (SG) are associated with incentive structures that are the inverse of those associated with efforts to reduce greenhouse-gas emissions. The latter is a global commons problem, the structure of which requires cooperation at the highest jurisdictional level (i.e., international cooperation) in order to advance mitigation adequately. It has been challenging to design and implement institutions and agreements to support such multilateral cooperation.

In contrast, certain types of SG can – in principle – be implemented effectively at relatively low financial cost – low enough to be borne by small states or non-state entities acting on their own. The impacts of such action, however, might be substantial, at regional or even global scales. These could include the intended beneficial impacts – decreased global average surface temperature – plus other, potentially adverse side effects.

Given the incentive structure associated with SG, its potentially substantial impacts, and the uncertainty (of various kinds) surrounding it, the governance of SG deployment will be challenging. Among the questions associated with governance design – to be addressed in this workshop – are:

(1) *Who* ought to and/or will *specify criteria* for SG deployment, and who ought to and/or is likely to decide when the criteria are satisfied?

(2) *What* will or should these criteria be? They may include:

a. Regulatory criteria developed by policy makers;

b. Criteria specified by "agents"/actors who might engage in SG deployment;

c. Physical, engineering, social, economic, ethical, and other dimensions.

(3) *How* should/will decisions about deployment be made; what decision-making process should/will be utilized?

(4) *What institutions*, either existing or new, are appropriate as decision-making venues? What will or should be the legal framework of such institutions?

(5) How might SG complement and/or undermine national, regional, and multilateral institutions and policy to mitigate or adapt to climate change – and, more broadly, to manage climate risks?

(6) SG is both a hedge against uncertain but potentially catastrophic risks of (or, alternatively, damages from) climate change – and has its own associated risks, known and unknown. How can we better understand these uncertainties and incorporate them into useful decision-making processes?

(7) How might we best define a research agenda for the governance of SG deployment?

The workshop will not provide definitive answers to the very challenging questions listed above, but it will advance our understanding of this set of issues and, it is hoped, move the research community some steps further toward a shared set of assumptions and consensus on options for the governance of SG deployment.

Each participant in the workshop will prepare a brief on an aspect of the topic of interest to her or him. These briefs will be released in a volume edited by the Harvard Project on Climate Agreements, in February 2019.

GOVERNANCE OF THE DEPLOYMENT OF SOLAR GEOENGINEERING

Agenda

Thursday, September 27

Harvard Kennedy School, Taubman Building, Fifth Floor, Nye Conference Room

8:00 – 9:00 am **Breakfast**

9:00 – 9:30 am **Welcome, framing, and self-introductions**

Robert Stavins

Director, Harvard Project on Climate Agreements

David Keith

Faculty Director, Harvard's Solar Geoengineering Research Program

9:30 – 9:50 am **Status update on – and insights from – research in the social sciences on the governance of SG deployment**

Scott Barrett

9:50 – 10:10 am **Responses**

Stefan Schäfer, Gernot Wagner

10:10 – 10:40 am **Discussion**

10:40 – 11:00 am **Break**

11:00 – 11:20 am **Status update on – and insights from – research in law on the governance of SG deployment**

Daniel Bodansky

11:20 – 11:30 am **Response**

Albert Lin

11:30 am – 12:00 pm **Discussion**

12:00 – 1:15 pm **Lunch**

Speaker: John Holdren

1:15 – 1:35 pm **Thinking about SG – an economic perspective**

Martin Weitzman

1:35 – 1:45 pm **Response**

James Stock

1:45 – 2:10 pm **Discussion**

2:10 – 2:30 pm **Criteria for decision making on deployment (Questions 1 – 3)**

Sheila Jasanoff

2:30 – 2:50 pm **Public perceptions of SG deployment and implications for governance**

Dustin Tingley

2:50 – 3:00 pm **Response**

Lucas Stanczyk

3:00 – 3:30 pm **Discussion**

3:30 – 3:50 pm **Break**

3:50 – 4:10 pm **Institutional venues for governance of SG deployment (Questions 4 – 5)**

David Victor

4:10 – 4:30 pm **Responses**

Joshua Horton, Sikina Jinnah

4:30 – 5:00 pm **Discussion**

5:00 – 5:15 pm **Closing observations for day 1**

Daniel Schrag

6:30 – 8:00 pm **Reception and dinner**

Harvard Kennedy School, Taubman Building, Fifth Floor, Allison Dining Room

Speaker: Janos Pasztor

Friday, September 28

Harvard Kennedy School, Taubman Building, Fifth Floor, Nye Conference Room

8:00 – 8:30 am **Breakfast**

8:30 – 8:50 am **Governance of SG deployment under conditions of uncertainty (Ques. 6)**

Richard Zeckhauser

8:50 – 9:10 am **Responses**

Daniel Heyen, Kate Ricke

9:10 – 9:30 am **Discussion**

9:30 – 10:15 am **Insights from other international regimes into the governance of SG deployment**

Matthew Bunn, Joseph Nye, Meghan O'Sullivan

10:15 – 11:00 am **Discussion**

11:00 – 11:20 am **Break**

11:20 – 11:50 am **A research program for the governance of solar-geoengineering deployment (Question 7)**

David Keith, Jesse Reynolds

11:50 am – 12:15 pm **Closing observations, discussion, and next steps**

Robert Stavins

GOVERNANCE OF THE DEPLOYMENT OF SOLAR GEOENGINEERING

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