



# SCoPEX Governance & U.S. Policy Developments

Americas Conference on Solar Radiation Modification:  
Science, Governance and Implications for the Region  
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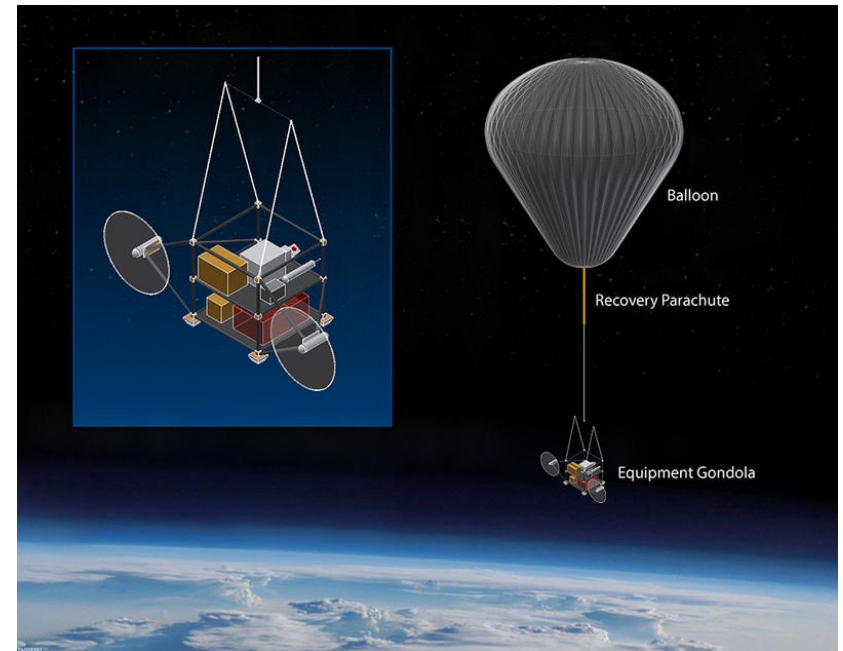
Co-Chair, Independent Advisory Committee to Oversee SCoPEX

# IPCC Sixth Assessment Report

“Co-evolution of SRM governance and research provides a chance for responsibly developing SRM technologies with broader public participation and political legitimacy, guarding against potential risks and harms relevant across a full range of scenarios”

# SCoPEX Independent Advisory Committee

- First applied governance body for solar geoengineering
- Established July 2019 to recommend whether and how SCoPEX should go forward
  - Formed by process independent of Harvard
  - Tasked to independently assess risks and benefits; establish norms for oversight, transparency, public consultation



([www.projects.iq.harvard.edu/keutschgroup/scopex](http://www.projects.iq.harvard.edu/keutschgroup/scopex))

# SCoPEx Independent Advisory Committee: Terms of Reference

- To advise Harvard University and the SCoPEx Research Team on several arenas, including:
  - (a) The scientific quality and importance of the proposed experiments, including scientific review and processes and standards for transparency;
  - (b) Risks associated with the proposed research program, including environmental and social risks;
  - (c) Effectiveness of risk management including regulatory compliance management of environmental health and safety;
  - (d) The need, objectives and possible formats for stakeholder engagement; and
  - (e) Other issues as deemed necessary by the Advisory Committee.
- To provide a periodic public written evaluation of the experiment plan in the arenas described above.
- To ensure that mechanisms are established to share both research outcomes and governance lessons learned from SCoPEx with researchers and diverse stakeholders.

# Advisory Committee Framework

Focus Area	Goal
Technical and Scientific Merit Review I: <a href="#">Engineering Integrity and Safety</a>	Determine if the proposed experiment poses any significant or imminent safety concerns
Technical and Scientific Merit Review II: <a href="#">Scientific Merit Review</a>	Assess the scientific merit of SCoPEX including the feasibility of the experimental approach and contribution to knowledge and understanding of stratospheric particle dynamics
<a href="#">Financial Transparency</a>	Ensure all funding sources for the SCoPEX project are publicly disclosed and reviewed by the AC for possible conflicts of interest
<a href="#">Legal Review</a>	Ensure that the proposed experiment meets all regulatory requirements including permits and approvals in compliance with any potential location of a launch
<a href="#">Societal Review</a>	Ensure that different sets of public and stakeholders (e.g. potential local community where the experiment could take place as well as the larger global community) have opportunities to meaningfully engage with the RT on the proposed experiment.

# U.S. Policy Developments: funding 2020-2022

- 2020: US \$4 million to the National Oceanic and Atmospheric Administration (NOAA)'s Office of Atmospheric Research
- 2021: US \$9 million to NOAA
- 2022: US \$9 million to NOAA

*Earth's Radiation Budget.*—The Committee provides no less than \$9,000,000 for modeling, assessments, observations, and monitoring of stratospheric conditions and the Earth's radiation budget, including the impact of the introduction of material into the stratosphere from changes in natural systems, increased air and space traffic, proposals to inject material to affect climate, and the assessment of solar climate interventions. Within these funds, the recommendation further directs OAR to improve the understanding of the impact of atmospheric aerosols on radiative forcing, as well as on the formation of clouds, precipitation, and extreme weather.

# US Policy Developments: further recommendations

- Earth's Radiation Budget.—NOAA is encouraged to **develop an interagency program**...to manage near-term climate hazard risk and coordinate research in climate intervention and to coordinate with NASA for long-range manned and autonomous in-situ atmospheric observational capabilities. OAR is also directed, in coordination with NASA and the Department of Energy (DOE)...to improve the understanding of the impact of atmospheric aerosols on radiative forcing, as well as on the formation of clouds, precipitation, and extreme weather.
- NOAA is directed to support OSTP, in coordination with DOE and the National Science Foundation (NSF), **to provide a five year plan**...with a scientific assessment of solar and other rapid climate interventions in the context of near-term climate risks and hazards. The report shall include:
  - (1) the definition of goals in relevant areas of scientific research;
  - (2) capabilities required to model, analyze, observe, and monitor atmospheric composition;
  - (3) climate impacts and the Earth's radiation budget; and
  - (4) the coordination of Federal research and investments to deliver this assessment to manage near-term climate risk and research in climate intervention.

# US Policy Developments: further recommendations

- Solar Geoengineering.—OSTP is directed to develop an interagency working group, in coordination with NOAA, NASA, DOE, and other relevant agencies, to manage nearterm climate hazard risk and coordinate research in climate intervention. In parallel, the interagency working group should also establish a research governance framework to provide guidance on transparency, engagement, and risk management for publicly funded work in solar geoengineering research.