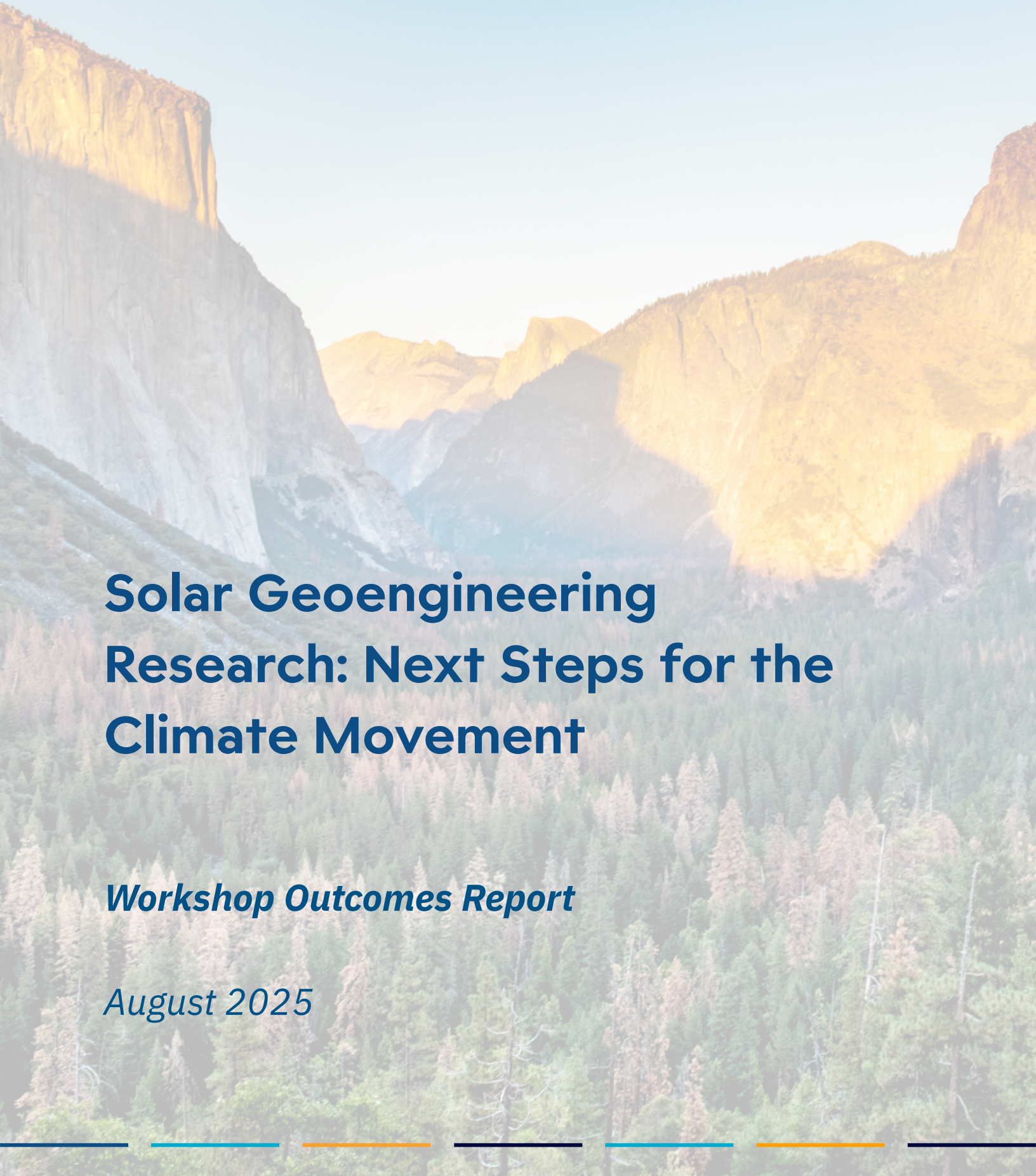
Chesapeake Climate Action Network

The Alliance for Just Deliberation on Solar Geoengineering

Environmental Defense Fund



Solar Geoengineering Research: Next Steps for the Climate Movement

Workshop Outcomes Report

August 2025

Solar Geoengineering Research: Next Steps for the Climate Movement Workshop Outcomes Report

Hosts

- The Chesapeake Climate Action Network (CCAN)
- The Alliance for Just Deliberation on Solar Geoengineering (DSG)
- Environmental Defense Fund (EDF)

Workshop Objectives

The workshop had three primary objectives:

1. **Learn about SRM and bring the conversation back to your organizations**
2. **Discuss and build towards a collaborative progressive vision of where the climate movement goes from here**
3. **Facilitate a networking space and build relationship across the movement**

Resources: Additional education resources and infographics on SRM science and governance can be found here.

Notes: A synthesis of the notes taken during the workshop can be found here.

Executive Summary

SRM refers to large-scale approaches that increase the amount of sunlight reflected back into space, cooling the planet. SRM can reduce global temperatures, but its impacts on physical and social systems—such as precipitation, agriculture, health, and geopolitics—are not yet well understood. Over the past two years, momentum around SRM research and governance has accelerated around the world, with global organizations like the UN Environment Programme (UNEP), the UN Human Rights Council (UNHRC), and several major countries, including the U.S. and U.K., highlighting the need to examine SRM's potential role in climate responses.

As SRM gains traction in global scientific, policy, and philanthropic circles, the U.S. climate movement is being called to engage more directly and deliberately. This workshop created space for climate organizations to deepen their understanding of SRM, examine the current state of research, and reflect on how governance and public trust intersect with broader climate justice priorities.

This workshop approached the conversation on SRM with the understanding that many participants are encountering these ideas for the first time – or are still forming their organizational perspectives. The goal was to start the process of building organizational stances such as this one, deepen understanding of what SRM is, and create space for actors to begin grappling with how SRM fits within broader climate justice conversations.

Participants heard from scientists, governance experts, and NGO leaders from around the world about the state of research on SRM, the case for more academic research, and the current status of potential research ban bills and risks to scientific inquiry around the country. Discussants emphasized that, while there are potential harms of SRM deployment, this entire conversation must be approached through a "risk vs. risk" framework: potential unknowns must be compared to the also unknown risks of unmitigated climate disaster.

Key Takeaways

Research Landscape: The current SRM research landscape is highly uneven, primarily concentrated in modeling and theoretical studies, with limited outdoor experimentation. The U.K., through its ARIA program, has emerged as a leader, dedicating approximately $70 million to SRM research – though it is predominantly focused on modeling. The Australian Marine Cloud Brightening (MCB) initiative remains one of the few ongoing outdoor experiments. In the U.S., SRM research remains limited and fragmented. It has focused mainly on atmospheric monitoring and modeling, while proposed small-scale outdoor experiments, including Harvard's SCoPEx project and the University of Washington's Marine Cloud Brightening experiment in Alameda, California, have been paused or canceled.

Significantly, SRM will feature more prominently in the next IPCC report (AR7), which signals broader scientific acknowledgment of its potential importance in climate response portfolios. Despite this increased attention, key uncertainties remain regarding SRM's environmental impacts—particularly on ecosystems, agriculture, rainfall patterns, and public health. These knowledge gaps underline a critical need for rigorous, internationally coordinated research.

Participants underscored concerns about regulatory and ecological impacts, emphasizing that past proposals for outdoor experiments faced backlash due to inadequate transparency and engagement processes. There was consensus that future experiments must adhere to transparent, publicly vetted governance frameworks to build necessary trust.

Governance Gaps: The workshop identified substantial gaps in governance frameworks, which currently remain fragmented and insufficiently robust at national and international levels. Participants emphasized that democratic oversight, transparency, and clear regulatory frameworks are crucial not only for the ethical conduct of SRM research but also for building public trust. There is considerable concern that without proper governance, SRM could become subject to unilateral deployment by private entities or individual nations, creating significant geopolitical tensions.

Discussions highlighted the inadequacy of proposals advocating outright bans, which, while well-intentioned as precautionary measures, might inadvertently restrict responsible, publicly accountable research while failing to deter private or clandestine experimentation. To address these governance gaps, participants expressed the need for developing comprehensive, internationally recognized norms and guidelines, backed by transparent mechanisms to monitor research activities and ensure equitable participation across diverse global stakeholders.

Framing the Risks: There was broad concurrence that deferring meaningful public and policy discourse on SRM until the emergence of acute climate tipping points could result in rushed, opaque, and potentially harmful decision-making processes.

Participants highlighted the danger of emergency-driven SRM deployment, stressing that such scenarios would likely undermine transparency and accountability, and might disproportionately harm vulnerable communities and ecosystems. Proactive and inclusive research conducted transparently and ethically was emphasized as essential to developing the knowledge and governance systems needed to responsibly manage SRM's potential deployment. The workshop underscored that comprehensive risk assessment frameworks and early public engagement are necessary to prevent scenarios where private or inadequately regulated deployments become irreversible or create unforeseen ecological and societal consequences.

Equity and Capacity Gaps: Participants highlighted major equity and capacity deficiencies, particularly concerning how SRM research and deployment could affect human health, ecological stability, and adaptation efforts. The current landscape severely underrepresents the perspectives and capacities of the most climate-vulnerable regions, particularly in the Global South.

Narrative and Political Risks: The rapid proliferation of misinformation and conspiracy theories surrounding SRM emerged as a significant barrier, especially in the context of U.S. political polarization. Reactionary legislation driven by unfounded conspiracy theories, such as those alleging "chemtrails," has resulted in problematic state-level bills, most notably in Florida and Louisiana, which impose burdensome restrictions on legitimate scientific research.

Participants stressed the critical importance of addressing misinformation through proactive and transparent communication strategies, emphasizing democratic values, scientific integrity, and realistic assessments of climate risks. Reframing the narrative to highlight SRM research as an essential component of informed, democratically accountable climate policy could help neutralize fear-based and binary narratives. Such reframing efforts, coupled with engagement from respected civil society voices, were seen as essential to fostering a balanced, constructive public discourse capable of effectively addressing the complex, evolving landscape of SRM research and potential deployment.

Conclusion

Ultimately, the workshop underscored that engaging with SRM doesn't mean endorsing it. Instead, it means recognizing that research and governance decisions are already being made, and that civil society must play a role in shaping the conversation in a just and equitable way. For climate organizations, this is a chance to build a shared understanding, identify responsible paths forward, and ensure that transparency and accountability remain central in a rapidly evolving field.

Potential Next Steps

Organizers concluded the workshop by encouraging participants to initiate internal discussions within their organizations about their potential role in shaping the future of SRM. Based on discussions during the workshop, questions to guide internal deliberations might include: Does our organization see SRM as an important area for engagement? What capabilities or expertise could we contribute to SRM governance or research discussions? How could we contribute to public understanding and dispel misinformation about SRM? What is our internal stance on the ethical considerations surrounding SRM research? Can we play a role in promoting transparency, equity, and accountability in related activities?

Participants should also explore their organization's position regarding the inclusivity of SRM conversations, specifically around engaging frontline communities and addressing capacity gaps in the Global South. Questions could include: How can we advocate for equitable inclusion of diverse stakeholders in shaping research agendas? In what ways can we support capacity-building to empower vulnerable communities to participate meaningfully in SRM governance and decision-making?

By beginning these thoughtful internal dialogues, climate groups can choose their potential contributions and commitments, fostering more coordinated and effective civil society engagement in future SRM discussions and governance efforts.

Workshop Agenda

Day 1: July 10, 2025

2:05-2:30	Welcome and Opening Remarks	
2:30-3:00	PRESENTATION: Rising Temperatures - Context Behind SRM	Contextualizing remarks from scientists and activists how dire recent warming has been
3:00-3:50	PRESENTATION: SRM 101	Briefing from technical experts on what it is
3:50-4:00	Tea/Coffee Break	
4:00-5:00	PANEL: Questions on SRM	Panel of scientists and professors answering any questions
5:00-6:00	Break	
6:00-8:00	Dinner and Happy Hour	

Day 2: July 11, 2025

8:30-9:00	Breakfast	
9:00-9:15	Welcome and Recap of Day 1	
9:15-10:35	Game: Decisions for the Decade	Simulation of the rational choices made by states under increasing temperatures
10:35-10:45	Break	
10:45-11:30	PRESENTATION: Governance of SRM and the state of the field globally	Presentation on what governance means and looks like for this topic
11:30-11:45	Tea/Coffee Break	
11:45 -12:45	PANEL: Reflections on SRM in the U.S.	Panel of national security, foreign policy, and energy policy experts
12:45-1:45	Lunch	
1:45-2:30	PANEL: Civil Society Action	Panel of activists and advocates that are considering the topic
2:30-3:00	PRESENTATION: State Ban Bills and Misinformation	Presentation on the dozens of ban bills that have been proposed around the country
3:00-3:15	Tea/Coffee Break	
3:15-4:00	PRESENTATION: Understanding and contextualizing the Global South Response to SRM	Videos of SRM activists from around the world
4:00-4:45	Breakout group discussions	Discussions around what this could mean for the work your group does
4:45-5:15	Plenary Discussion	
5:15-5:30	Workshop Reflections, Feedback, and Closing Remarks	