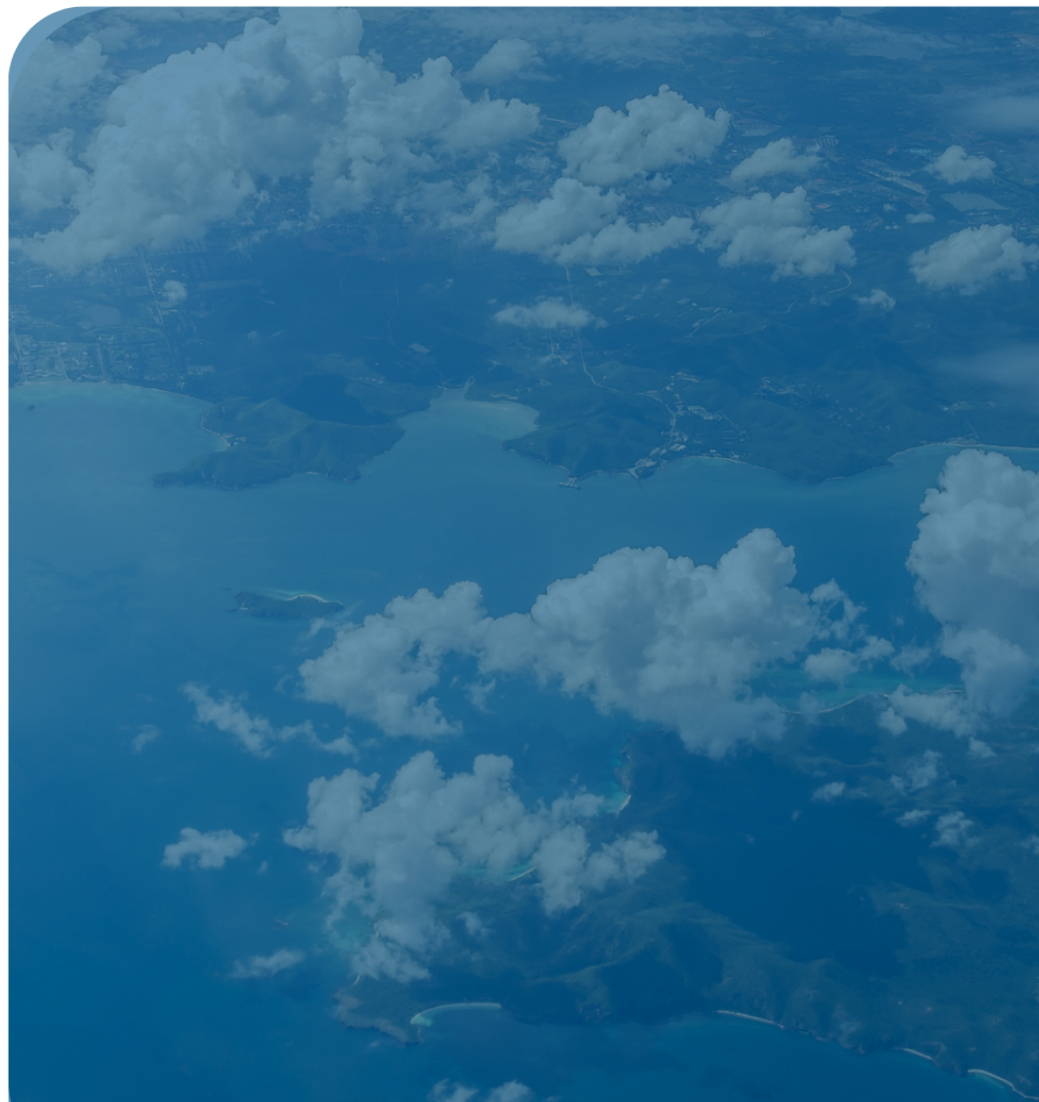




The Alliance for
**Just Deliberation on
Solar Geoengineering**

A Justice-Based Analysis of Solar Geoengineering & Capacity Building

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Introduction

From the standpoint of [justice](#), the growing interest in [solar geoengineering](#) represents both a danger and an opportunity. This greater interest will place a spotlight on the need for genuinely inclusive governance and debate around its potential use, but developments in the science and engineering of solar geoengineering could also potentially outstrip the ability of vulnerable and marginalized actors to have a legitimate role in decision-making. Irresponsible actors are already flowing into the space and using rhetoric to either shut down any discussion or claiming that even the riskiest forms of solar geoengineering are both prudent and inevitable.

It is increasingly likely that the world will not act quickly and decisively enough to prevent climate change from causing serious, even catastrophic social and environmental impacts.¹ What's more, these impacts will disproportionately harm those who are least responsible for climate change and have had the least say in shaping the global response to the crisis.² Solar geoengineering has garnered so much interest in part because it is double-edged: it may have the potential to alleviate the broader injustice of climate change by giving the climate vulnerable the means to protect themselves,³ but it also may also have the potential to exacerbate the current inequalities and cause even greater harm.⁴

Without inclusive, justice-based interventions, this mounting interest could lead to growing odds that humanity will slouch towards unilateral and illegitimate deployment of solar geoengineering that is more likely to exacerbate climate injustice rather than alleviate it.⁵ There is an urgent need to offer realistic, [justice](#)-based recommendations for ensuring that decisions around research as well as any decision to deploy or refrain from solar geoengineering includes the input of those most affected.⁶ A major goal of the Alliance for Just Deliberation on Solar Geoengineering (DSG) is to aid in the building of just governance of solar geoengineering through targeted governance [capacity building](#) amongst climate vulnerable communities and nations.

In order for the decision-making process concerning solar geoengineering to be just, two things, fundamentally, must be true. First, the outcome of the process needs to track the requirements of distributive justice: e.g., are interests that are more urgent or important treated that way even if those who possess the interests are disadvantaged and/or marginalized? Of course, questions concerning who deserves what or whose interests are more urgent are subject to deep and stubborn wells of disagreement and uncertainty and so managing a global consensus is difficult.⁷ When using these ideas, it is wise to rely upon values that have a strong global consensus, such as refraining from harm, non-retrogression, or equality of opportunity.⁸ Furthermore, there is likely to be scientific uncertainty about solar geoengineering's potential effects and that will make it correspondingly difficult to determine how the intervention will distribute benefits and harms.

Given this widespread disagreement and uncertainty on what amounts to just outcomes of deliberation about solar geoengineering, concern about the substantive justice of the decision's outcomes must be complemented by the second fundamental need: a justice-based *process* by which the decision is made. That is, does the process reflect the participation of those affected by the decision?⁹ Procedural justice is especially important in the context of solar geoengineering since the potential outcomes are so uncertain, the interests so variable, and the potential effects so wide-ranging and disparate.¹⁰

Procedural Justice and Governance Capacity Building

Despite it being essential to legitimacy, efforts to support procedural justice—especially with regards to vulnerable and marginalized people—in solar geoengineering governance have been spotty and partial.¹¹ While some resources have been directed at developing the scientific understanding of and research into solar geoengineering for the Global South¹², there has been little focus on assisting the Global South in the implementation of and participation in any subsequent set of governance structures or institutions. It is important to distinguish between scientific capacity building and governance capacity building for climate vulnerable communities. The bulk of capacity building resources have been dedicated to the former while the latter has been comparatively ignored. Yet, governance capacity is key to being able to create, implement, and participate in effective governance structures. This dynamic reflects a significant justice gap: leaving organizations and people with the ability to understand solar geoengineering from a scientific perspective but lacking the tools to translate their own understanding of their own interests into policy.

Governance capacity building plays a key role in both substantive and procedural justice. From a procedural perspective, preventing oppression requires that individuals have a say in the processes that govern their lives and that these institutions operate in ways that are built on an understanding of their interests. Their *genuine* participation is necessary for broader legitimacy. From a substantive point of view, the participation of the vulnerable and the marginalized plays an essential role in ensuring that the substantive outcomes are more just. Privileged actors that purport to speak and/or act on behalf of others are likely to have significant blindspots and the homogeneity of social privilege leads to groupthink and bias. An effective way—perhaps the most effective way—to combat these bad tendencies is to have the decision-making or consultative group be diverse, with a special focus on ensuring the participation of those who are typically excluded. Thus, increasing the role of vulnerable and marginalized groups in decision-making, especially decision-making with global effects and considerable uncertainty, both respects the direct claim that these individuals have to be involved in the decision-making and also inoculates the process from typical failures and bias.

Duties of Justice and SG Capacity Building: Who

Of course, it does not follow from the fact that doing something would be *good* or would contribute to justice that any particular group ought to do it. There is an important question that needs to be answered: *who* should work to fill the justice gap on capacity building? There are at least three criteria to assign responsibility for responding to an injustice:

- **Resource Requirement:** Actors who work towards trying to address the justice gap should have adequate resources to achieve their goals. Resources should be understood broadly to include both material resources and expertise: knowledge of the solar geoengineering scientific and governance landscape is essential to building similar competencies.¹³
- **Power implies Responsibility:** If an actor or set of actors wield potential power to significantly affect the life of others based on geography, wealth, or stature, they have a particular responsibility to make sure that they do so legitimately.¹⁴
- **Benefitting implies Responsibility:** If an actor could benefit from the action, the practice, or social structure, then one has a greater responsibility to ensure that the benefits are distributed more justly, especially if others have few resources.¹⁵

There is much disagreement about which of these criteria (resources, power, benefits) are most important and even if all of them are. However, all of these criteria, at least in the case of solar geoengineering, point in the same direction because the scientists, activists, and policymakers of the global North that make up the most influential elements of the climate and solar geoengineering research and policy communities meet all three criteria:

- **Resources:** The community is uniquely placed to offer the material and epistemic resources to those climate vulnerable communities who need capacity building.
- **Power:** The community is already shaping, influencing, and directing the policy and research agenda concerning solar geoengineering.
- **Benefits:** The community would likely benefit from the outcomes of decisions around research and potential deployment of solar geoengineering.

As a consequence, the broader climate policy, research, and activist communities in the global North, and those associated with solar geoengineering, in particular, have a duty to fill the justice gap concerning governance capacity-building.

Just Solar Geoengineering Capacity-Building: Pitfalls and Concerns

The various actors engaged in solar geoengineering research and policy-making—including DSG—have a justice based imperative to assist in capacity-building. DSG, therefore, has a bidirectional focus: our goal is to guide, coordinate, and conceptualize this need, especially for privileged actors, and to also contribute to that capacity-building work itself. Let's close with a discussion of two important caveats

and obstacles that may get in the way of meeting those goals. First, our understanding of how to meet these obligations may be *impoverished*. That is, those in the global North may think they can meet these responsibilities simply by providing financial resources or the occasional workshop. Second, a more robust understanding of this obligation may be *hubristic* and *paternalistic*. In other words, we might recapitulate problematic power imbalances in the process of robust capacity building.¹⁶ And we can see these pitfalls as mirror images of each other: the more robustly we understand our need to assist in capacity-building, the greater the risk that our intervention will be disrespectful or over-ambitious.

How might we respond to these concerns? First, we have developed a robust model of capacity building that tries to learn from the shortcomings of previous efforts and move beyond them. We are committed to capacity building that flows from the ground up. DSG avoids a problematic conception of capacity building in two important ways. We are committed to a *sustained* process, and we are committed to the development of core skills that require more than a single workshop or the provision of cash infusion to be effective. Rather, they demand a committed partnership that endures over time.

This sustained engagement is also a response to concerns about paternalism or problematic power dynamics. As stated in [Building Solar Geoengineering Governance Capacity](#), DSG is committed to having communities in the areas of work take the lead in expressing what they need and how DSG can help. Thus, DSG's objective is to establish robust partnerships with the relevant populations such that our assistance is demand-oriented: which elements of capacity building (e.g., skills and competencies related to critical understandings of scientific models, implementation in governance, or participation in governance) are most requested by those we are partnering with after we have engaged with them. However, another mechanism by which we plan to avoid paternalism is to develop an understanding of capacity-building as skills and competencies oriented that will be useful to these actors *regardless of their eventual policy position on solar geoengineering*. That is, DSG is not interested in imposing a particular policy view on our partners and it is entirely possible that they will use these skills and capacities in ways that DSG cannot foresee or predict; the goal is to equip our partners with the ability to participate effectively and equitably on their own behalf.

This engagement, however, must go both ways. DSG is founded on the idea that everyone has an equal claim to participate in and influence the governance systems that regulate their lives, and we are committed to partnering with organizations that share that value. This is both because diversity is instrumentally valuable—including the perspectives of the vulnerable avoids blindspots and bias—and because DSG must avoid being complicit in the very same injustice it wishes to combat. Once cannot, in the name of justice and equality, be indifferent to whether our own partners properly include the vulnerable, marginalized, and disempowered within their own societies in their own deliberations, internal structure, leadership, and policies. Of course, inclusion need not look the same for every organization and for every society, so it is important for DSG to be culturally competent, open to learn, and charitable in its engagements with partners. These judgments will be complex and vary from case to case, but DSG must be committed to both the universal value of equality and to respecting culturally specific forms that value may take.

Conclusion

The full and robust participation of everyone affected by solar geoengineering is a requirement of procedural justice and grounded in the moral demand that people be given a voice in the decisions that deeply shape their lives. However, there has been little focus and few resources dedicated—within the solar geoengineering scientific and policy communities—to assist in ensuring that climate vulnerable and underrepresented groups can participate in the governance of solar geoengineering. DSG aims to fill this justice gap through sustained engagement with partners in these groups to build their capacity to implement and participate in solar geoengineering governance.

Endnotes

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