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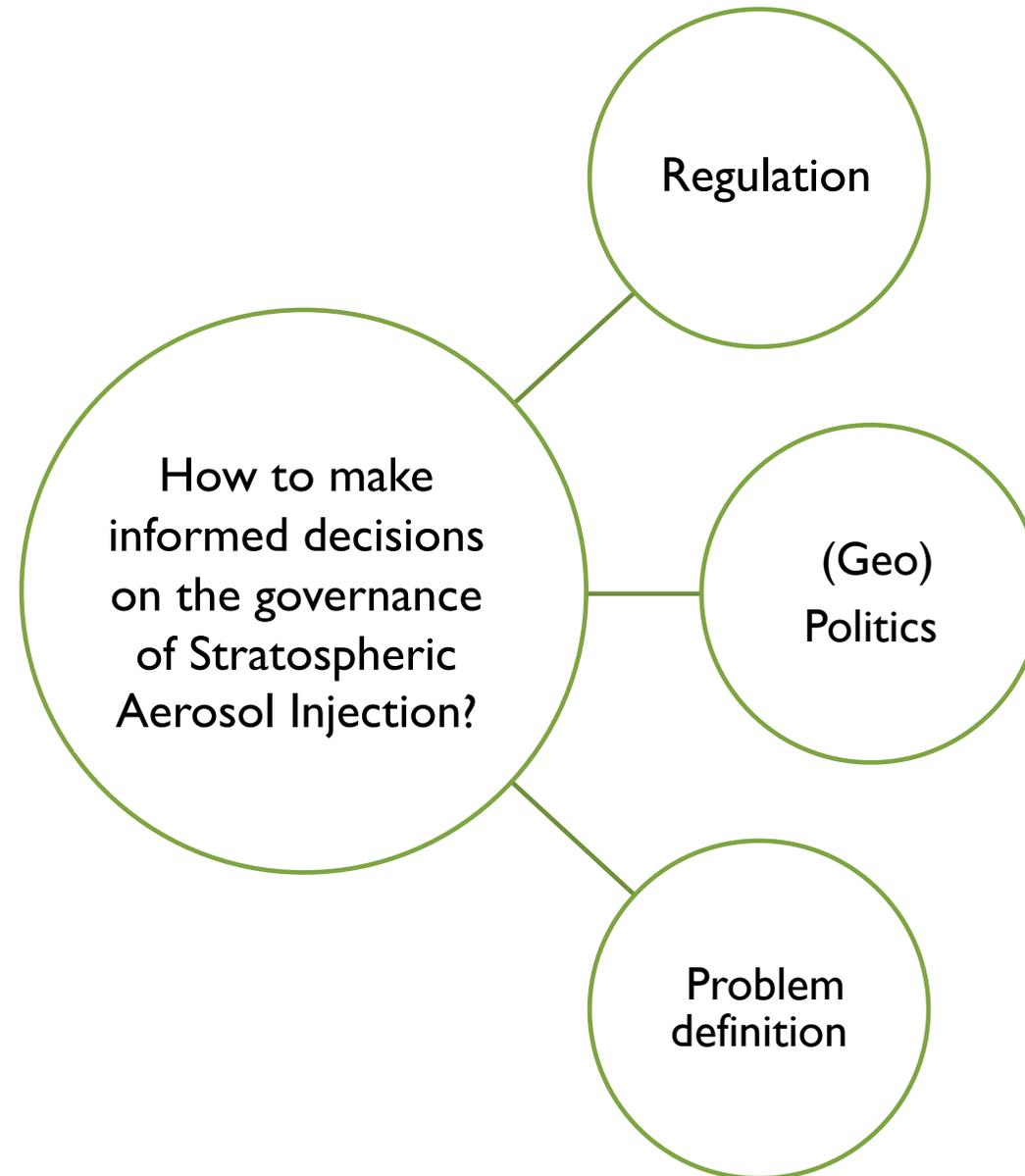
# GOVERNANCE OF STRATOSPHERIC AEROSOL INJECTION

## Aims of this presentation:

Introduce key political dynamics around SAI governance.

- > Many aspects
- > Political context
- > Different narratives

Provide a guide to informed and reflexive decision-making.



# I. SCALE AND STATUS OF GOVERNANCE

Governance arrangements differ for research and deployment

## Research

- Subject to national, regional and organizational regulations for scientific research
- Often based on scientific codes of conduct and the judgement of ethical review boards
- Different requirements for indoor and outdoor research

## Deployment

- Subject to international law
- No dedicated instrument for SAI
- (Hostile) intention and some (negative) effects are addressed under several international conventions
- Some efforts to address the beneficial sides of SAI in international regulation are emerging

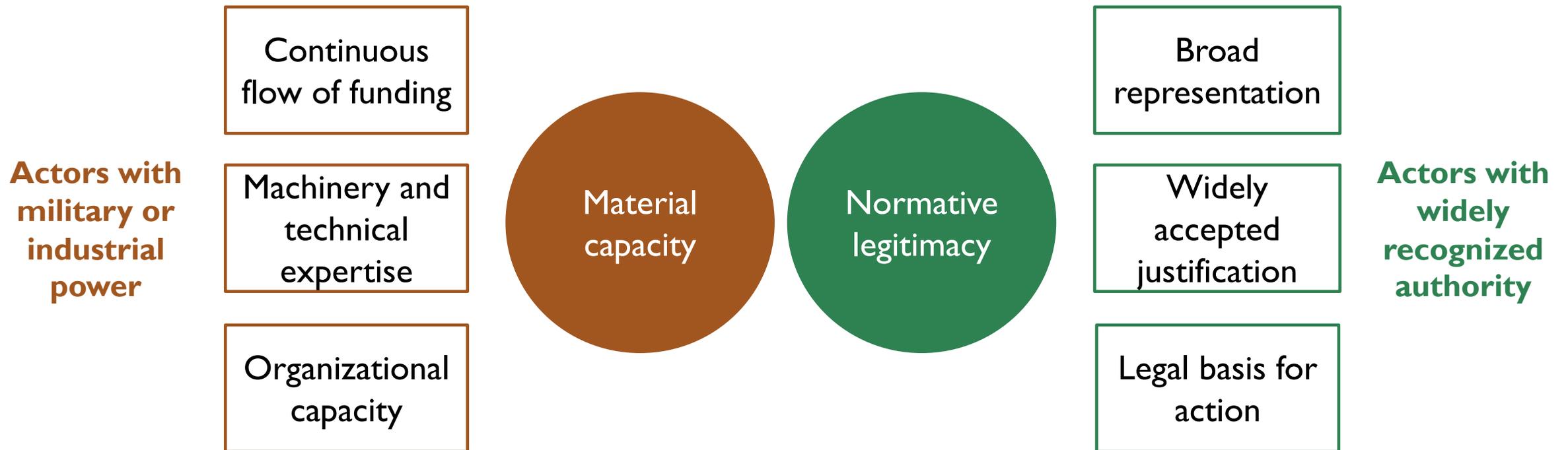
## II. ARENAS OF INTERNATIONAL GOVERNANCE

Some aspects of SAI are addressed in international law and policy

Montreal Protocol	Convention on Long-Range Transboundary Air Pollution	Convention on Biological Diversity (CBD)	Environmental Modification Convention (ENMOD)	Paris Agreement	International Organization for Standardization (ISO)
Governs substances that affect the Ozone Layer	Governs long-range air-pollution, including Sulphur emissions	Discourages geo-engineering approaches that affect biodiversity	Bans military and hostile use of environmental modification techniques	Sets an ambitious temperature target that could justify SAI	Is developing guidance on how to calculate 'radiative forcing climate footprints'

### III. CAPACITY AND LEGITIMACY

Long-term deployment of SAI requires both material capacity and normative legitimacy



## IV. POLITICAL CONCERNS

There are different concerns related to engaging with SAI governance



Hesitation

- 'Slippery slope' towards deployment
- Mitigation deterrence / 'moral hazard'
- International reputation
- Effects on climate change negotiations
- Unclear scientific status
- Lack of knowledge and capacity to engage



Advancement

- Rogue actors
- National security
- Climate-change induced effects, including conflict and migration
- International leadership and competition
- Legal status for investment in technology

## V. POLITICAL CONTEXT

To understand countries' positions on SAI, accounting for history and values is key



Economic  
priorities



Experience with  
large-scale  
projects



Environmental  
values and  
principles



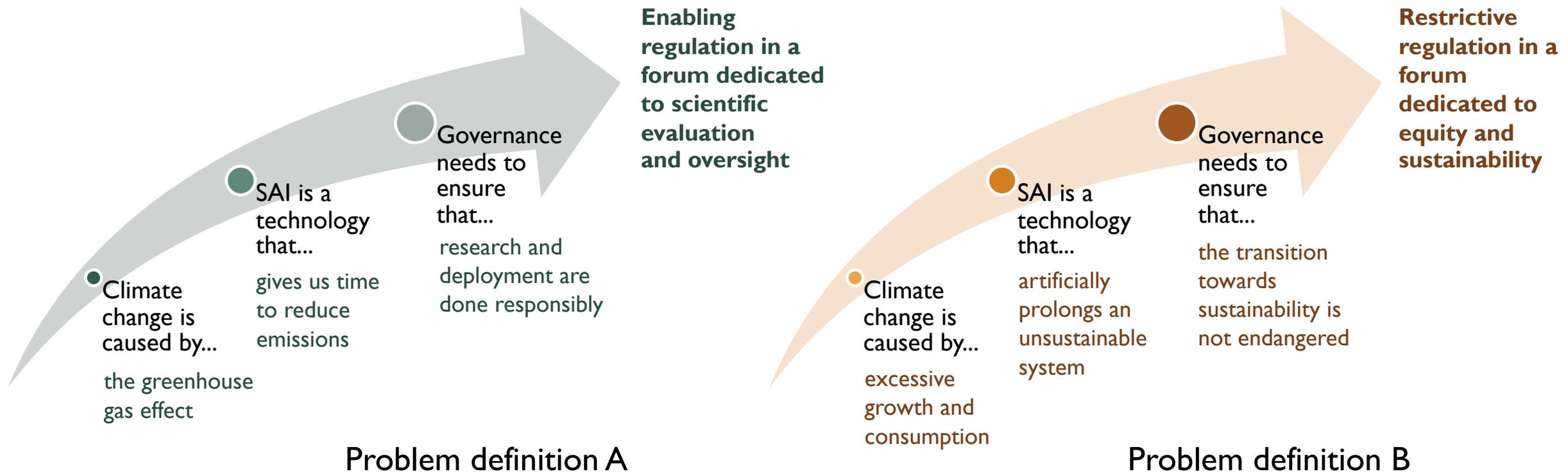
Understanding of  
own role in  
international  
context



Respect for  
international  
diplomacy

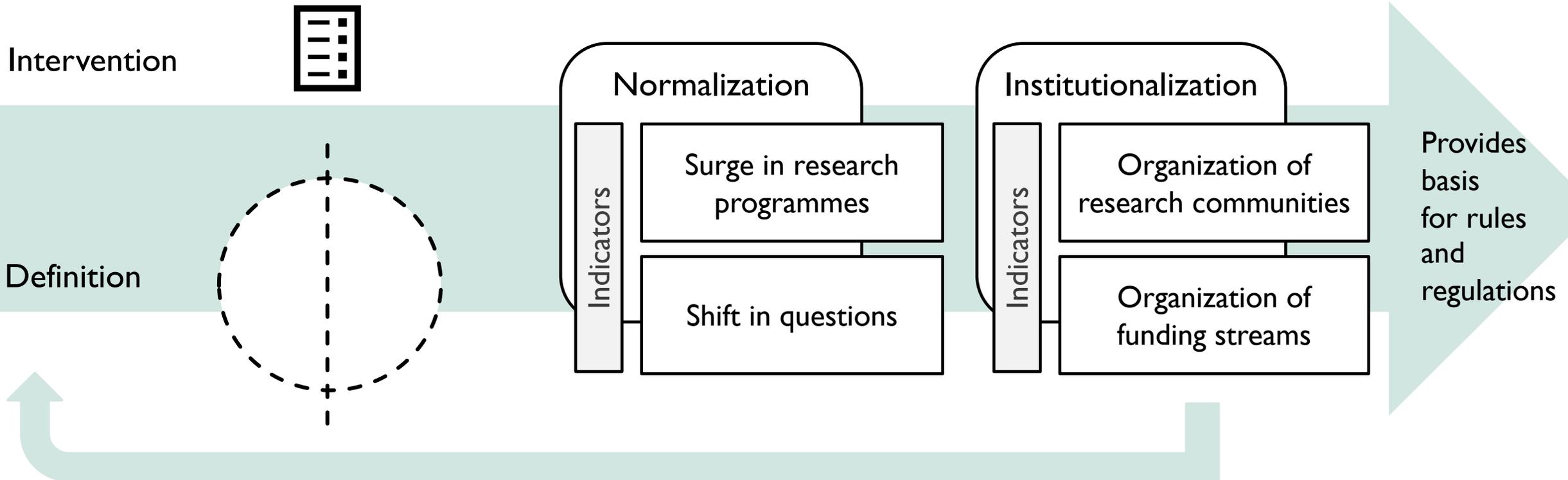
## VI. PROBLEM DEFINITION AND JURISDICTION

How a problem is defined influences how, when and where SAI is governed



# VII. DE-FACTO GOVERNANCE

Interventions such as authoritative reports inform future rules and regulations



## VIII. SCIENCE-MEDIA-POLICY

In a situation of crisis, things may not go as planned. Lessons from the Covid 19 pandemic:

- Narrow metrics (temperature, reproduction number) can obscure other important goals
- There is no global planner. In a situation of crisis, countries rely on themselves
- Social media can influence the conduct of science
- Politicians may introduce policies based on visibility, not effectiveness
- Stop-gap measures carry the risk that the initial goal is forgotten



COMMENT

<https://doi.org/10.1038/s43247-020-00018-1>

OPEN

Pandemic politics—lessons for solar geoengineering

Holly Buck<sup>1,2</sup>, Oliver Geden<sup>3,4</sup>, Masahiro Sugiyama<sup>5</sup> & Olaf Corry<sup>6,7</sup>

How can we make informed decisions about developing governance mechanisms for SAI?

**Acknowledge existing institutions**

- No blank slate for SAI governance
- Some concerns are already addressed, or could be with small changes
- Consider who maintains authority in time of crisis

**Contextualize SAI in a wider political context**

- Role of norms, interests and expectations
- Importance of material and normative power
- Other dynamics than scientific rationality

**Recognize the power of narrative**

- No 'neutral' account of SAI, all narratives are political
- Critically reflect on dominant problem definitions
- Ask whose perspectives are missing

Sources and further reading	Guidance
<p>Kerryn Brent (2016) <u>The Role of the No-Harm Rule in Governing Solar Radiation Management Geoengineering</u>. University of Tasmania.</p>	<p>Provides a comprehensive review on the status of international law for SAI</p>
<p>Holly Buck, Oliver Geden, Masahiro Sugiyama &amp; Olaf Corry (2020) <u>Pandemic Politics – Lessons for Solar Geoengineering</u>. Nature Communications Earth &amp; Environment, 1:16.</p>	<p>Collects insights from the Covid19 pandemic for governing SAI in an emergency</p>
<p>Aarti Gupta &amp; Ina Möller (2019) <u>De Facto Governance: how authoritative assessments construct climate engineering as an object of governance</u>. Environmental Politics, 28:3, 480-501.</p>	<p>Explains how implicit 'de-facto' governance shapes the field for explicit 'de-jure' governance</p>
<p>Aarti Gupta, Ina Möller, Frank Biermann, Sikina Jinnah, Prakash Kashwan, Vikrom Mathur, David R Morrow &amp; Simon Nicholson (2020) <u>Anticipatory governance of solar geoengineering: conflicting visions of the future and their links to governance proposals</u>. Current Opinion in Environmental Sustainability, 45, 10-19.</p>	<p>Delineates visions and rationales that inform the purpose of different SAI governance mechanisms</p>
<p>Ina Möller (2020) <u>Political Perspectives on Geoengineering: Navigating Problem Definition and Institutional Fit</u>. Global Environmental Politics, 20:2, 57-82.</p>	<p>Presents insights into how policy makers confront and engage with geoengineering governance questions</p>