

Example Tools & Mechanisms for Solar Geoengineering Governance

As discussions on [solar geoengineering](#) (also known as solar radiation modification or SRM) governance evolve, a range of tools and mechanisms in the near term can help ensure transparency, accountability, and equitable decision-making. These example mechanisms aim to reduce risks, prevent misuse, and promote responsible research and policy development.



Principles & Codes of Conduct

Principles & Codes of Conduct establish ethical guidelines and best practices for SRM research and governance. They:

- Ensure responsible and ethical research practices.
- Prevent unilateral or harmful actions.
- Align with international climate goals and justice frameworks.

Example Tools:

- International agreements on responsible SRM governance.
- Ethical frameworks developed by scientific institutions.



Research Registries & Transparency Mechanisms

Research Registries & Transparency Mechanisms are public databases that track SRM research activities and findings. They:

- Provide accountability and oversight in SRM research.
- Reduce risks of secrecy and unilateral action.
- Facilitate global collaboration and knowledge sharing.

Example Tools:

- Open-access registries of SRM experiments.
- Independent monitoring and reporting platforms.



Permits & Regulatory Approvals

Permits & Regulatory Approvals are national or international permits required for SRM research or potential deployment. They:

- Ensure SRM research adheres to legal and environmental safeguards that are specific to SRM needs, and adds to them where they are unclear or lacking
- Prevent unauthorized or unsafe experiments.
- Strengthen public confidence in governance processes.

Example Tools:

- Government-issued research permits with strict guidelines.
- International review boards for large-scale experiments.



Intellectual Property (IP) Laws & Patents

Intellectual Property (IP) Laws & Patents are the legal frameworks governing ownership and use of SRM-related technologies. They:

- Prevent the commercialization and monopolization of SRM.
- Ensure equitable access to SRM research and technology.
- Avoid corporate dominance in climate decision-making.

Example Tools:

- Restrictions on private patents for critical SRM technologies.
- Open-access licensing models for SRM research.



Public Engagement & Deliberation

Public Engagement & Deliberation is the inclusive decision-making processes involving diverse stakeholders. They:

- Ensure affected communities have a voice in SRM governance.
- Improve public trust through transparent discussions.
- Strengthen governance legitimacy by incorporating diverse perspectives.

Example Tools:

- Citizen assemblies and public forums on SRM research.
- Capacity building for Indigenous and climate-vulnerable communities to enable engagement in decision-making processes.



Clarifying Exit Ramps & Safeguards

Clarifying Exit Ramps & Safeguards offer governance mechanisms ensuring that SRM research does not lead to automatic deployment. They:

- Maintain flexibility for reversing or halting SRM efforts if necessary.
- Prevent a slippery slope toward full-scale deployment without consent.
- Ensure governance remains adaptive to new risks and findings.

Example Tools:

- Predefined research guardrails.
- Well defined nondeployment agreement as research is ongoing.



The Path Forward

Developing robust governance tools for SRM is difficult but essential to ensuring that research and policy decisions are transparent, inclusive, and accountable.

By implementing these mechanisms, policymakers and researchers can navigate uncertainties while safeguarding climate justice and global cooperation.