What is governance? Taking a broad stance

According to the Oxford Dictionary, governing means controlling and influencing, but governance goes beyond that. The Intergovernmental Panel on Climate Change (IPCC) in 2018 takes a broader perspective and defines governance as "a comprehensive and inclusive concept of the full range of means for deciding, managing, implementing, and monitoring policies and measures."

Governance encompasses more than just nation-state governments. It involves multiple stakeholders and sectors, including academia and research, media and culture, business and finance, civil society, and various levels of government (international, regional, national, and local). This comprehensive understanding recognizes that effective governance requires collaboration and cooperation among diverse actors to make decisions, manage resources, implement policies, and monitor their outcomes.

Governance of Solar Radiation Management: moral hazard VS moral imperative

At the heart of governance on Solar Radiation Management (SRM) lies a compelling debate: the moral hazard versus moral imperative. This debate has emerged as a critical factor contributing to the lack of progress in establishing governance frameworks for SRM. Let's delve into this thought-provoking discussion.

Critics raise concerns that SRM could be seen as an alluring "quick technological fix" that undermines the urgent actions needed to reduce emissions, ultimately leading to a moral hazard. They argue that relying on SRM may divert attention and resources from essential mitigation and adaptation efforts, creating a false sense of security.

On the other side of the spectrum, proponents assert that the escalating exposure and vulnerability to climate hazards necessitate exploring the potential benefits of SRM. They highlight how SRM could offer critical support to climate-vulnerable populations at risk from extreme heat or approaching critical climate tipping points. From this perspective, there is a moral imperative to explore SRM's potential as a means of safeguarding communities and ecosystems.

To mitigate the potential moral hazard associated with Solar Radiation Management (SRM), various recommendations have been put forth. Some of these recommendations include:

- Ensuring that SRM is considered as an additional measure and not a substitute to mitigation and adaptation efforts, as SRM does not tackle root causes of climate change (c*f the Briefing note on Science*)
- Engaging in open dialogue, stakeholders can better understand the complexities and potential consequences associated with SRM. Emphasizing the risks and limitations of SRM can help foster informed decision-making and public awareness.
- Establishing predetermined thresholds ensure that SRM activities are reevaluated and potentially discontinued if certain conditions or risks arise

The question of whether the research or potential deployment of SRM represents a moral hazard or moral imperative remains unresolved on the international stage. As the climate cause evolves, adaptation has become an inevitable issue, and Carbon Dioxide Removal (CDR) has gained significant traction in the climate agenda. Similarly, there is a possibility that SRM might undergo a transformation in perception.

It is worth noting that similar concerns about deterring action were initially raised when discussing the concept of "adaptation." However, over time, adaptation has emerged as a crucial component of climate policies and is no longer viewed as an excuse to avoid mitigation actions. The evolution of the perception of adaptation offers insightful elements for understanding the potential trajectory of SRM in terms of moral hazard.

SRM governance frameworks

At present, there is no specific international law dedicated to Solar Radiation Management (SRM). However, a recent resolution by the United Nations (UN) has acknowledged the need for legal guidance concerning activities related to intentional large-scale modification of the atmosphere, which includes SRM. Several multilateral agreements such as the Convention on Biological Diversity, the UN Convention on the Law of the Sea, the Environmental Modification Convention, and the Vienna Convention on the Protection of the Ozone Layer and its Montreal Protocol contain provisions that are applicable to SRM. Nevertheless, none of these agreements offer comprehensive coverage, and there is no overarching international process that connects and guides SRM governance. The absence of robust and formal governance mechanisms for SRM poses risks and challenges.

Scholars have proposed various options for establishing an institutional framework to govern SRM. These options range from consortia of states and integration into existing UN bodies such

as the United Nations Framework Convention on Climate Change (UNFCCC) or the Convention on Biological Diversity (CBD), to the creation of global forums or less formalized governance structures. The choice of an institutional home for SRM governance depends on factors such as effectiveness, legitimacy, and the ability to address the complex challenges posed by SRM.