



Will Rising Engagement in Solar Radiation Modification Activities Help Shape the Governance it Demands?

Within months of withdrawing, a resolution on Solar Radiation Modification (SRM) submitted to the Sixth Session of the United Nations Environment Assembly (UNEA-6) by the Government of Switzerland, backed by Monaco and Israel, seeking the United Nations Environment Programme (UNEP) to lead an assessment process through an appointed expert group nominated by member states, mandated to develop a repository of information on the current status of SRM science, research, deployment capabilities, ethics and potential impacts, including risks, benefits and uncertainties.

Ungoverned SRM small-scale field experimentation continues. New actors have emerged to fill the knowledge and bridge the governance gaps, actively engaging or funding fail-fast, fail-safe research activities to answer thorny questions. Whether and which SRM techniques, risk assessed against the risks of climate change unchecked can cool the planet quickly should global warming exceed the 1.5-2°C Paris Agreement temperature goal with the least harm to communities and ecosystems and buy the world time to decarbonize. [Temperature overshoot](#) is a concerning phenomenon because it may trigger [tipping points](#) such as the melting of the Arctic winter sea ice (leading to accelerated warming via ice-albedo feedback) and dieback of the Amazon leading to cascading effects on other tipping points, some of them irreversible.

The argument for more information and research into SRM and other emerging technologies to counteract global warming becomes compelling when [reports surface of New Delhi, India, hitting](#) record temperatures of 52.9°C with students fainting and many suffering from dehydration and [Southern Africa experiencing an extended drought](#) that is threatening energy and food production. Some argue that SRM research would lead to a slippery slope to deployment or create a moral hazard, diverting necessary attention and resources away from urgently needed action to reduce greenhouse gas emissions from the atmosphere and adapt to climate impacts. Whilst some argue that for climate-vulnerable communities and future generations, it is a moral imperative to better understand the impacts of a world with or without SRM to understand how best to respond if the world overshoots the 1.5-2°C. Could the actions of these new actors whether onlookers approve or not potentially aid in catalyzing the necessary governance framework for SRM research and experimentation at UNEA-7 or within another multilateral governance process?

In April the [Marine Cloud Brightening \(MCB\) Program at the University of Washington](#) launched its first outdoor test off the deck of a decommissioned aircraft carrier in San Francisco Bay, spraying microscopic salt particles into the air. It was an open collaboration of atmospheric scientists and other experts studying how clouds respond to particles (aerosols) in the



atmosphere. The research sought to understand how interactions between aerosols and clouds impact the climate system and to investigate the feasibility and potential impacts of reducing climate warming by intentionally increasing the reflection of sunlight from marine clouds.

The [Co-CREATE](#) project will, over the next three years, examine governance principles and guidelines for responsible SRM research. This project will develop and propose—jointly with stakeholders—conditions for, and elements of, a possible governance framework for SRM research, including experiments in the European Research Area. It aims to support decisions on whether or not, and under which circumstances, SRM research and experiments may be warranted from scientific and societal viewpoints. The project includes an extensive co-creation approach with experts, stakeholders, and rightsholders, including marginalized and affected communities such as Indigenous peoples in the Arctic and communities across the Global South.

[Advanced Research and Invention Agency \(ARIA\)](#) was created by a United Kingdom Act of Parliament, and sponsored by the Department for Science, Innovation, and Technology, to fund projects across the full spectrum of Research and development disciplines, approaches, and institutions. One of its programs entitled ‘Managing our climate and weather through responsible engineering’ seeks to investigate different approaches within SRM by working with scientists and engineers to fund the field trials, the necessary modeling, simulation, indoor experiments, observation, and monitoring required to support the trials, as well as conduct research into the legal, ethical, governance and geopolitical dimensions of the approaches under investigation.

The former Executive Director of the [Carnegie Climate Governance Initiative \(C2G\)](#) Janos Pasztor, will advise the US-registered Israeli startup Stardust Solutions on the governance implications of its work. The investor-funded group composed of scientists and engineers will employ an end-to-end approach to de-risk stratospheric aerosol injection (SAI) technology. C2G was impartial regarding the world’s use or not of any proposed climate-altering technology leaving the decision for society to make. Whereas Stardust Solutions is not impartial. However, Janos’ governance analysis and recommendations will be transparent and publicly available, focusing on governance issues only, rather than specific scientific or technological aspects. Janos will donate his remuneration to advance the work of a civil society organization and aims to highlight governance implications for all stakeholders, not to support or oppose Stardust's objectives, but hopefully as a means of moving the needle on a needed governance framework for SRM.

Stardust Solutions is the second private sector entity to enter this space after [Make Sunsets](#) which sells cooling credits created from stratospheric aerosol injection activities. Commercial interests



in the highly contentious ungoverned space of SRM have led to many concerns, especially in the case of Make Sunsets. In 2022 it launched an unauthorised experiment from two sites in the northern Mexican state of Baja California. The Mexican government and surrounding communities were unaware of the experiment and were not given “prior notice” leading to the Government of Mexico rejecting all future geoengineering activities. SRM YW is closely following the governance discussion and how the work of new actors will contribute to the development of effective governance frameworks. It is critical that SRM governance is not fragmented but agreed upon by all member states at the highest governing body on the environment which is the UNEA. With the rapid pace of developments in SRM research activities, it is a crucial time for young people to learn and engage more in the needed SRM governance discussions.

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SRM YW reaffirms its impartial stance on all decisions related to the use or non-use of SRM techniques and technologies. However, SRM YW welcomes the need for scientifically robust information on the status of SRM science, research, deployment capabilities, ethics, and potential impacts, including risks, benefits, and uncertainties to provide a holistic and transdisciplinary science-policy basis for governments and various rights and stakeholders to establish a baseline on which governance can exist.

We want to hear your views. Your views matter to us, and we want to hear from young people all around the world. Reach out to us via our social media platforms or email us at info@srmyw.org