Agenda

Consultative Workshop and Science-Policy Dialogue on Solar Radiation Modification

19-20 May 2025

Summary: Under the joint leadership of the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) a hybrid Consultative Workshop and Science Policy Dialogue on Solar Radiation Modification (SRM) will be hosted in Geneva in May 2025. The aim is to foster a shared understanding of the status of SRM science and research and to facilitate Science-Policy dialogues for a collective inquiry on this topic based on the updated science information. The two-day workshop supported by the International Science Council (ISC) and World Climate Research Programme (WCRP) will therefore include knowledge sharing sessions followed by a facilitated Science-Policy Dialogue. The Workshop will bring together key experts, researchers and practitioners working on SRM as well as UNEP Member States and Major Groups of Stakeholders.

Objectives:

Provide space for international dialogue, knowledge sharing and exchange on SRM with a view to help build capacity enabling more effective and inclusive engagement.

Inform and support UNEP and WMO on how it would consider this issue in the future and any subsequent work.

Proposed agenda:

Day 1 *Knowledge Sharing sessions*		
Date	**Time**	**Activity**
19 May	08:00	Registration and coffee Meeting venue – WMO Headquarters, Geneva
	09:30	**Welcome and setting scene** **Speakers:** Ko Barrett, Andrea Hinwood
	10:15	1. **Introducing Solar Radiation Modification (SRM)** ***Objective:*** To examine the fundamental principles behind SRM; the different approaches and techniques for SRM under consideration; and how SRM will interact with other climate change factors. **Moderator:** Frank Keustch **Panelists:** Bala Govindasamy, Kate Ricke, Nana Ama Browne Kluste

19 May	11:00	Break Morning Tea
	11:30	2. **SRM observational, monitoring and detection capabilities and gaps.** ***Objective:*** To assess the current state of observational and monitoring capabilities for detecting SRM-induced climate effects. **Moderator:** Amanda Maycock **Panelists:** Daniele Visioni, Godwin Ayesiga, Pengfei Yu
	12:15	3. **SRM Modelling – Challenges, Opportunities and Regional Perspectives.** ***Objective:*** To explore the status, challenges and advancements in modelling Solar Radiation Modification (SRM), with a focus on regional dynamics and downscaling efforts. **Moderator:** Govindasamy Bala **Panelists:** Daniele Visioni, Graciela Raga, Inés Camilloni
	13:00	Lunch
	14:00	4. **Scale matters – From small-scale experiments, pilot testing to deployment –** Differentiating between experimentation operational deployment. ***Objective:*** To explore the distinctions between field experimentation, pilot testing, and deployment of stratospheric aerosol injection (SAI) and their scales. **Moderator:** Inés Camilloni **Panelists:** Babatunde Abiodun, Christopher Lennard, John Moore
	14:45	5. **Identifying environmental, social and economic uncertainties and impacts from potential SRM deployments.** ***Objective:*** To identify the uncertainties, potential impacts (both positive and negative) and gaps in knowledge about the environmental, social and economic aspects of Solar Radiation Modification experimentation and (SRM) deployment. **Moderator:** Anna Stewart **Panelists:** Christopher Lennard, Christopher Trisos, Graciela Raga, Heri Kuswanto, Katja Fennel
	15:30	Afternoon Tea
	16:00	6. **Reducing Uncertainties in SRM Research.** ***Objective:*** To identify critical scientific uncertainties in current SRM research. This discussion will focus on key areas where scientific knowledge is still evolving, the challenges in quantifying SRM's climate impacts, and the advancements needed in observational data, modeling, and experimental research to enhance confidence in future assessments. **Moderator:** Obed Ogega **Panellists:** Juan Moreno-Cruz, Laura Wilcox, Ping Ping Narenpita

	17:30	Conclusion of Day 1

Day 2 *Science-Policy Dialogue*		
20 May	9:00	Welcome and Recap of Day 1 **Scene-settings: Understanding the emerging landscape: What's driving attention to SRM science?** **Facilitator:** Adam Day **Speakers:** Ko Barrett, Andrea Hinwood, and other experts
	9:30	7. **Collaboration, equity and inclusion in discussing SRM research and development** ***Objective:*** To explore strategies for improving collaboration, data/information sharing among research institutions, governments, and the private sector while ensuring inclusivity in SRM research and development. The discussion will explore the deepening and entrenched knowledge asymmetries, especially the North-South divide, and consider how to integrate ethical considerations and marginalized perspectives into the SRM discourse. Panelists will propose ways to build equitable research frameworks that promote transparency, accessibility, and global cooperation in SRM science and decision-making. The discussion will also consider the challenges and advantages of a risk-risk framing – where the potential side-effects and unknown risks are carefully assessed and compared to increasing climate change impacts without SRM. Three distinct rounds of science-policy dialogue
	10:00	Round 1: **Bridging knowledge gaps and addressing global asymmetries in SRM science** ***Objective:*** To examine how disparities in resources, technical capacity, and access to data shape who is able to produce, access, and influence the development of SRM-related knowledge. **Speakers:** Dhanasree Jayaram, Elisa Morgera, Jessy Reynolds, Julia Guivant Shuchi Talati
	11:00	Morning Tea
	11:30	Round 2: **Improving data sharing and transparency across sectors and borders** ***Objective:*** To explore key technical, institutional, and political barriers to effective data sharing in SRM-related research, including proprietary constraints, intellectual property concerns, national security sensitivities, and disparities in digital infrastructure and research capacity. The session will explore what kinds of enabling conditions – such as standardized protocols, shared ethical frameworks, and inclusive governance arrangements – might

		support more open and equitable access to SRM-related data. Also, the session will reflect on the role of transparency and trust in facilitating cross-border dialogue, particularly in contexts marked by asymmetries in resources, influence, or engagement in climate science and policy. **Speakers:** Aarti Gupta, Babatunde Abiodun, Frank Keutsch, Heri Kuswanto, Inés Camillioni
	13:00	Lunch
	14:00	Round 3: **Centering ethical and justice considerations in SRM: supporting public trust and accountability** *Objective:* To explore how ethical principles — such as equity, precaution, and intergenerational justice — can inform the design, conduct, and application of SRM science. The session will identify practical steps to elevate the perspectives of communities most vulnerable to climate change but often underrepresented in SRM discourse. Also, the session will reflect on the potential for SRM research to exacerbate existing social or environmental injustices and consider how ethical scrutiny can help guide more responsible and inclusive research pathways. The round will further examine how public engagement, consent, and transparency can be meaningfully integrated in decision-making processes; especially as scientific innovation accelerates under mounting climate pressure. **Speakers:** Brandon Jones, Catriona McKinnon, Dimiter Chalev, Joshua Amponsem, Juan Moreno-Cruz, Sikina Jinnah
	16:00	*Wrap up and next steps*
	17:30	**Concluding plenary** ***The future of SRM research and development: responsibility and ongoing dialogue*** **Facilitator:** Adam Day **Panelists:** Govindasamy Bala, Kate Ricke, Ko Barrett, Andrea Hinwood

Experts and speakers:

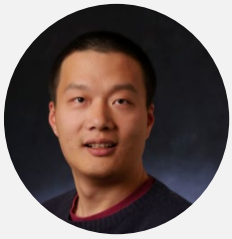
	Adam Day *Head of the Geneva Office of United Nations University Centre for Policy Research* ***(Day two Facilitator)***
	Aarti Gupta *Professor in Global Environmental Governance at Wageningen University*
	Amanda Maycock *Professor in Climate Dynamics at the University of Leeds*
	Andrea Hinwood *UNEP Chief Scientist*
	Anna M. Stewart Ibarra *Executive Director of the Inter-American Institute for Global Change Research*
	Babatunde Abiodun *Professor of the Atmospheric Science Programme at the University of Cape Town*

	Bala Govindasamy *Researcher at the Centre for Atmospheric and Oceanic Sciences - Indian Institute of Science*
	Brandon Jones *President, American Geophysical Union; Director, National Science Foundation*
	Catriona McKinnon *Professor of Political Theory at University of Exeter*
	Christopher Lennard *Climate scientist at the Climate System Analysis Group, University of Cape Town*
	Christopher Trisos *Senior Research Officer at the African Climate and Development Initiative at the University of Cape Town*
	Daniele Visioni *Research Associate at Cornell University and co-chair of the Geoengineering Model Intercomparison Project*

	Dhanasree Jayaram *Professor at the Department of Geopolitics and International Relations at Manipal Academy of Higher Education*
	Dimiter Chalev *Director, Rule of Law, Equality, and Non-Discrimination Branch, Office of the High Commissioner for Human Rights (OHCHR)*
	Elisa Morgera *UN Special Rapporteur on Climate Change and Human Rights, Professor of Global Environmental Law at the University of Strathclyde*
	Frank Keutsch *Professor of Engineering and Atmospheric Science at Harvard University*
	Godwin Ayesiga *Climate scientist at the Uganda National Meteorological Authority*
	Graciela Raga *Senior Scientist at the Institute for Atmospheric Sciences and Climate Change at the Universidad Nacional Autónoma de México*

	Heri Kuswanto *Associate Professor at the Department of Statistics of the Institut Teknologi Sepuluh Nopembe*
	Inés Camilloni *Professor at the Department of Atmospheric and Ocean Sciences of the University of Buenos Aires and Vice-Chair of IPCC's Working Group I for the seventh assessment cycle*
	Jesse Reynolds *Scholar of international environmental policy focusing on the governance of SRM; Degrees Initiative*
	John Moore *Research Professor at Arctic Centre, University of Lapland in Finland*
	Joshua Amponsem *Climate activist and Co-Director of the new Youth Climate Justice Fund initiative*
	Juan Moreno-Cruz *Associate Professor and Canada Research Chair in Energy Transitions, University of Waterloo*

	Julia S. Guivant *Professor at the Department of Sociology and Political Science, Federal University of Santa Catarina*
	Kate Ricke *Associate professor at the School of Global Policy and Strategy at UC San Diego California*
	Katja Fennel *Professor at the Department of Oceanography, Dalhousie University*
	Ko Barrett *WMO Deputy Secretary-General*
	Laura Wilcox *Associate Professor at the National Centre for Atmospheric Science at the University of Reading*
	Nana Ama Browne Klutse *Vice-Chair of IPCC's Working Group I - AR7 and Senior Lecturer at the Department of Physics at the University of Ghana*

	Obed Ogega *Programme Manager at the African Academy of Sciences*
	Pengfei Yu *Professor at the Institute for Environmental and Climate Research at Jinan University*
	Pornampai (Ping-Ping) Narenpita *Researcher at the National Electronics and Computer Technology Center of Thailand*
	Shuchi Talati *Scholar in Residence, Forum for Climate Engineering Assessment; Executive Director, The Alliance for Just Deliberation on Solar Geoengineering*
	Sikina Jinnah *Professor of Environmental Studies at UC Santa Cruz*