

TECHNICAL NOTE BY THE SECRETARIAT

DRAFT RESOLUTION ENTITLED “Solar Radiation Modification”

Submitted by Guinea, Monaco, Senegal and Switzerland

This technical note has been prepared by the UNEP Secretariat as background information in support of upcoming consultations and negotiations on the draft resolution. It outlines *inter alia* the following information: 1) relation to UNEP’s Medium-Term Strategy and Programme of Work and to existing UNEA resolutions/decisions as applicable, 2) an initial legal assessment and 3) a preliminary budget implications outlining for implementing the draft.

The draft resolution on Solar Radiation Modification (SRM) aims to establish an Expert Group on SRM with a mandate to examine the risks and opportunities of SRM deployment, with the objective of developing a comprehensive scientific report that upholds the highest standards of balance, rigour and accuracy. The Expert Group will provide the final report on its findings for consideration by UNEA-7. The draft resolution suggests that the report will be developed by the Expert Group, which will be composed of experts with the relevant technical expertise from member states, representation from international and regional conventions and organizations, particularly IPCC and IPBES, and other relevant stakeholders.

I. RELATION TO UNEP’S MEDIUM-TERM STRATEGY AND PROGRAMME OF WORK

The draft resolution primarily relates to one of the key objectives of UNEP’s Medium Term Strategy,¹ i.e. catalyzing actions through the foundational subprogrammes on science-policy and environmental governance and to the MTS’s thematic subprogramme on climate, and chemicals and pollution with some potential links to the nature subprogramme since SRM can potentially impact objectives in all three areas.

Specifically, in the Programme of Work it relates to the Climate action subprogramme primarily through Outcome 1A (Decision-makers at all levels adopt decarbonization, dematerialization and resilience pathways) and Outcome 1C (State and non-State actors adopt the enhanced transparency framework arrangements under the Paris Agreement). The draft resolution also relates to the Chemicals and pollution action subprogramme through its Outcome 3A (Human health and environmental outcomes are optimized through enhanced capacity and leadership in the sound management of chemicals and waste) and Outcome 3C (Releases of pollutants to air, water, soil, and the ocean are reduced). Finally, with regards to the Nature action subprogramme links can be made to Outcome 2A (An economically and socially sustainable pathway for halting and reversing the loss of biodiversity and ecosystem integrity is established); and Outcome 2C (Nature conservation and restoration are enhanced).

The resolution also speaks to the Foundational sub-programme on science-policy and will specifically link to Paragraph 95(a) of the MTS (Increasing the uptake of science for transformative action: UNEP will provide expertise on environmental matters, bringing the latest scientific evidence and multidisciplinary analysis on the state of the world environment and related trends to the attention of policy and decision makers at all levels and the public at large).

¹ <https://www.unep.org/resources/policy-and-strategy/people-and-planet-unep-strategy-2022-2025>

II. LEGAL ASPECTS

The draft resolution is not related to any UNEA Resolution. However, it is related to decisions XXXV/3 and XXXV/4 of the thirty-fifth meeting of the parties to the Montreal Protocol on Substances that deplete the ozone layer². Decision XXXV/3 focussed on assessing the potential effects of solar radiation modification technologies (SRM) on the Ozone layer. Decision XXXV/4 focussed on one of SRM technologies, namely stratospheric aerosol injection (SAI) and noted the limited scientific information available about the risks posed by this technology to the Ozone layer. It also called for more scientific understanding about the potential impacts of this technology on the ozone layer.

Parties to the Convention on Biological Diversity (CBD) issued non-binding decisions regarding geoengineering specifically, Decision X/33 (2010)³ which calls for Parties and other Governments to ensure that ‘no climate-related geo-engineering activities that may affect biodiversity take place’ in the absence of an adequate scientific basis, impact assessment and a global mechanism for governance. Decision XIII/14 (2014)⁴ noted that “more transdisciplinary and sharing of knowledge among appropriate institutions is needed in order to better understand the impacts of climate-related geoengineering on biodiversity and ecosystem functions and services, socio-economic, cultural and ethical issues and regulatory options”.

The draft resolution aligns with the aims of the above decisions. Specifically, the draft resolution seeks to support a process in which potential implications and information from a trusted source on SRM are shared with the global community. Essentially, the main objective of the draft resolution is to establish a space for an informed discussion on the status and trends of research across a range of disciplines and the research on the potential for deployment of SRM in order to potentially make informed decisions about SRM-governance schemes in the future.

Various bodies have also examined the issue of solar radiation modification technologies. The Human Rights Council⁵ examined the impact of new technologies intended for climate protection such as SRM on the enjoyment of human rights and highlights the need to prohibit climate-related geoengineering without an adequate scientific basis and prior assessment of the associated risks. The council observes that the deployment of solar radiation modification technologies poses, in particular, cascading global risks to people and the environment, the distribution of which would potentially be global. Similarly, the UNESCO World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) issued a report on the ethics of climate engineering in November 2023, which highlighted that these technologies could subvert existing climate policies and divert attention and financial support away from efforts focusing on emissions reduction and adaptation. The report also touched on how the use of such technologies could augment global inequalities.⁶

The International Law Commission has also considered SRM in the context of discussing Intentional large-scale modification of the atmosphere and highlights the need to ensure prudence and caution while conducting activities aimed at intentional large-scale modification of the atmosphere, subject to any applicable rules of international law, including those relating to environmental impact assessment⁷.

² Decision XXXV/3: Potential areas of focus for the 2026 quadrennial reports of the Environmental Effects Assessment Panel, the Scientific Assessment Panel and the Technology and Economic Assessment Panel and Decision XXXV/4: Stratospheric aerosol injection and protection of the ozone layer

³ Decision X/33: Biodiversity and Climate Change

⁴ Decision XIII/14: Climate related Geoengineering

⁵ In its report titled “Impact of new technologies intended for climate protection on the enjoyment of human rights” dated 10 August 2023 – A/HRC/54/47

⁶ In its report of the World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) on the ethics of climate engineering, dated 28 November 2023 - SHS/COMEST-13/2023/1REV

⁷ Refer to Guideline 7 on Intentional large-scale modification of the atmosphere contained in the Sixth report on the protection of the atmosphere by Murase Shinya, Special Rapporteur – A/CN.4/763 dated 11 February 2020

UNEP has also conducted an independent expert review on Solar Radiation Modification research and deployment⁸. The report recommends the consideration of establishing a globally inclusive, transparent, and equitable scientific assessment process for SRM; the exploration of the prospects and possibilities for a multilateral SRM governance framework to evaluate and address concerns on both SRM research and potential operational deployment; the creation of a broader framework for the governance of the stratosphere; and promotion of inclusivity in the evolution of SRM governance and research.

The Synthesis Report (SYR) of the IPCC Sixth Assessment Report⁹ examined SRM and underscores that the implementation of SRM approaches can introduce a widespread range of new risks to people and ecosystems, which are not well understood.

III. BUDGET IMPLICATIONS:

Taking into consideration the available existing resources, the overall extrabudgetary financial requirements for implementing this resolution during the two-year period (until UNEA-7) is estimated at **USD 1,353,897**. This amount provides for about USD 1,052,030 in staff positions with an estimated need of 3 full-time staff members for a 2-year period with one P4, one P2, and one G7. The amount also provides for USD 301,867 in non-staff resources including activities covering travel, consultancies, operational costs, contractual services: etc. The estimated resource requirements were made under the assumption that the Expert Group will be composed of 25 experts, with the appropriate regional and gender balance. The Group will convene in two meetings of 5 days each as well as a preparatory meeting and that each of these meetings will involve travel, venue, documentation and secretariat costs. It is premature to provide a more detailed estimation for non-staff resources until the resolution defines further details of the resolution process. The table below provides the breakdown of estimated costs by budget group.

Budget Category	Financial requirements	PSC rate @ 13%	Sub-total	Existing Resources	Net Requirement
Staff	931,000	121,030	1,052,030	0.00	1,052,030
Non staff	267,139	34,728	301,867	0.00	301,867
Total	1,198,139	155,758	1,353,897	0.00	1,353,897

IV. FOCAL POINTS

Secretariat focal points for draft resolution on “Solar Radiation Modification”: Jason Jabbour (Jason.jabbour@un.org) and Dina Abdelhakim (dina.abdelhakim@un.org)

⁸ See United Nations Environment Programme (2023). One Atmosphere: An independent expert review on Solar Radiation Modification research and deployment. Kenya, Nairobi.

⁹ Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115