

A Briefing on UNEP's report

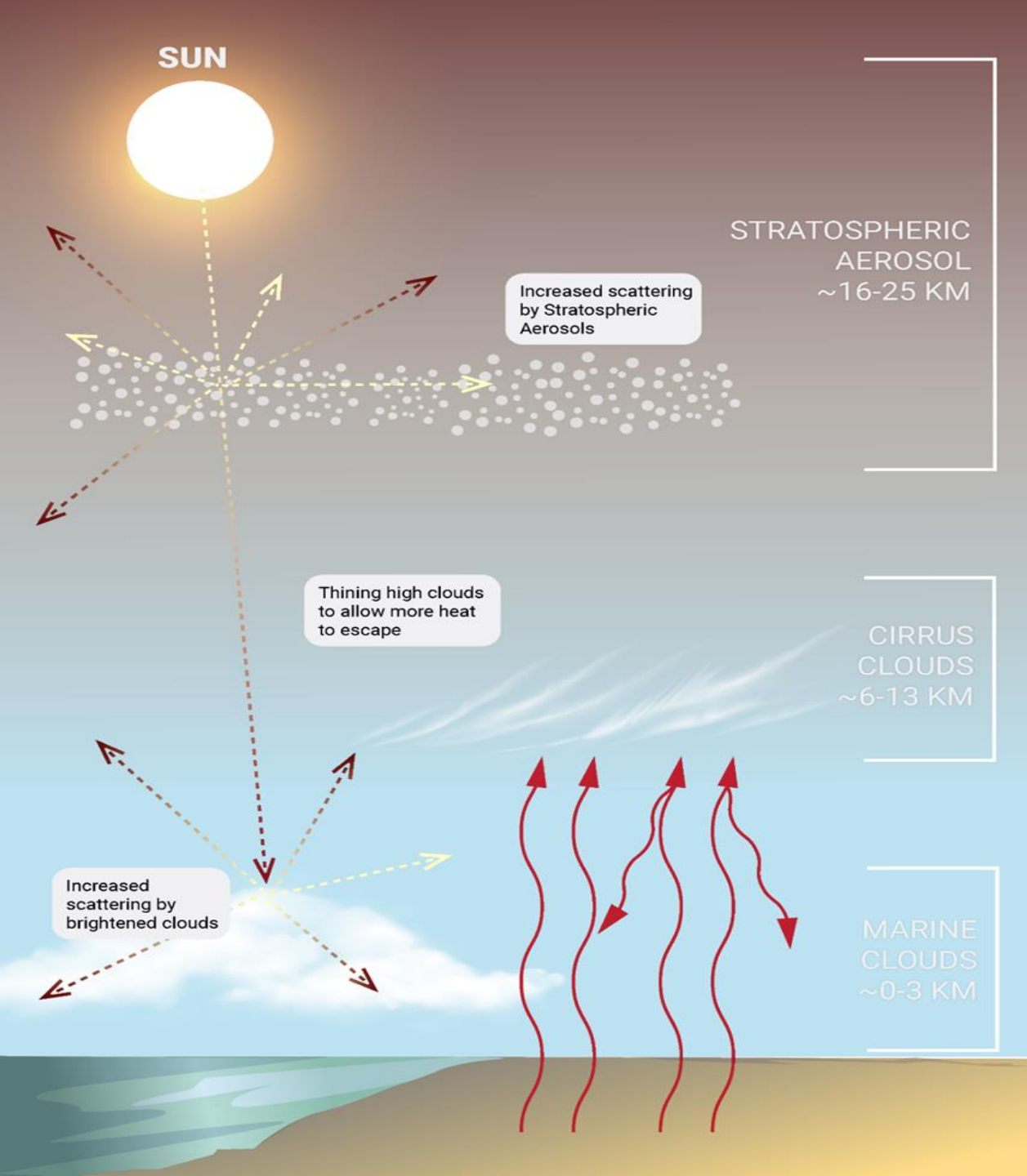
'One Atmosphere: An independent expert briefing on Solar Radiation Modification (SRM) research and deployment'

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27 April 2023

Background

- Latest IPCC report: the world is not on track to meet the Paris Target; deep, rapid and sustained cuts in GHG emissions are critical to avoid the most severe impacts and 1.5°C temperature overshoot.
- Increasing number of scientists advocating for research and development of solar radiation modification(SRM) technologies or solar geoengineering.
- Debate on these possible technologies and their impacts is polarized.





What is SRM?

- Solar Radiation Modification - technologies that aim to cool the planet
- SRM does not reduce, remove or manage GHG emissions
- Stratospheric aerosol injection (SAI) specifically, is being studied and discussed as an “emergency” SRM method - involves injection of aerosols into the stratosphere
- Modelling studies indicate a large-scale continuous SRM deployment could offset some effects of anthropogenic climate change on global and regional scales
- Volcanic eruptions give us some indication of the potential to cool the planet

Some key Findings

- Very little empirical evidence and literature on uncertainties and risks or potential of SRM deployment.
- The cooling effects of SRM would start to diminish as soon as an SRM deployment is halted – potential termination shock.
- Could delay closing of ozone hole.
- Impacts such as warming of polar regions, cooling of tropics and associated impacts not well understood.
- Research in this field is seen as the slippery slope to deployment.
- SRM technologies could influence geopolitics, introduce security risks and aid developed countries at the expense of vulnerable low-income countries.

Some Key Concerns

- A key concern is that decisions over SRM experimentation and deployment would not be made in a globally inclusive, equitable and transparent manner
- SRM discussions might shift financial, political and intellectual resources from mitigation and adaptation efforts (the 'moral hazard' problem)
- There is no governance over (i) research, (ii) indoor experimentation, (iii) small scale or (iv) large-scale outdoor deployment



Sydney Morning Herald 2017

Concluding Remarks

- **SRM does not solve the problem of climate change.**
- The UN is not actively promoting research but recognizes that research is on foot.
- SRM technologies are fraught with uncertainties on the potential risks and impacts, compounded by complex issues of ethics and governance.
- A precautionary approach is required.
- There is need to bring a level of scientific discipline and evidence to the table to further broaden the global understanding and engagement in the discussion of SRM.
- It is important to maintain neutrality and not be distracted from taking action on climate change.
- Discussions could be initiated regarding what form a governance framework might take.