

Key SRM approaches and their implications for delivering the SDGs

C2G Webinar: Solar Radiation Modification and the Sustainable Development Goals

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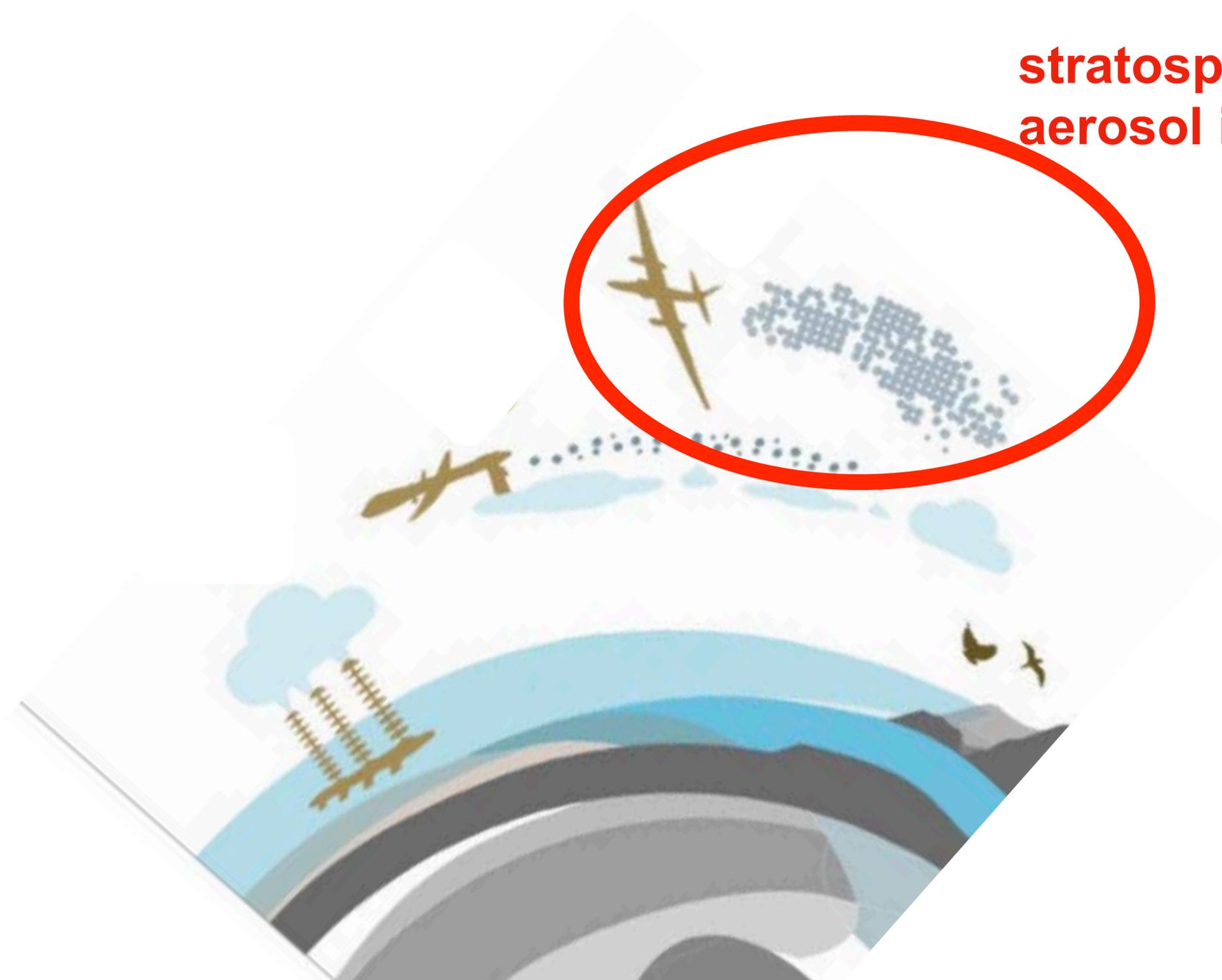


Content

- How SRM differs from greenhouse gas mitigation
- Key SRM approaches and their working principle
- The Sustainable Development Goals
- How SRM might intertwine with pursuit of the SDGs

Key SRM approaches

**stratospheric
aerosol injection**



Key SRM approaches

cirrus cloud thinning

**stratospheric
aerosol injection**

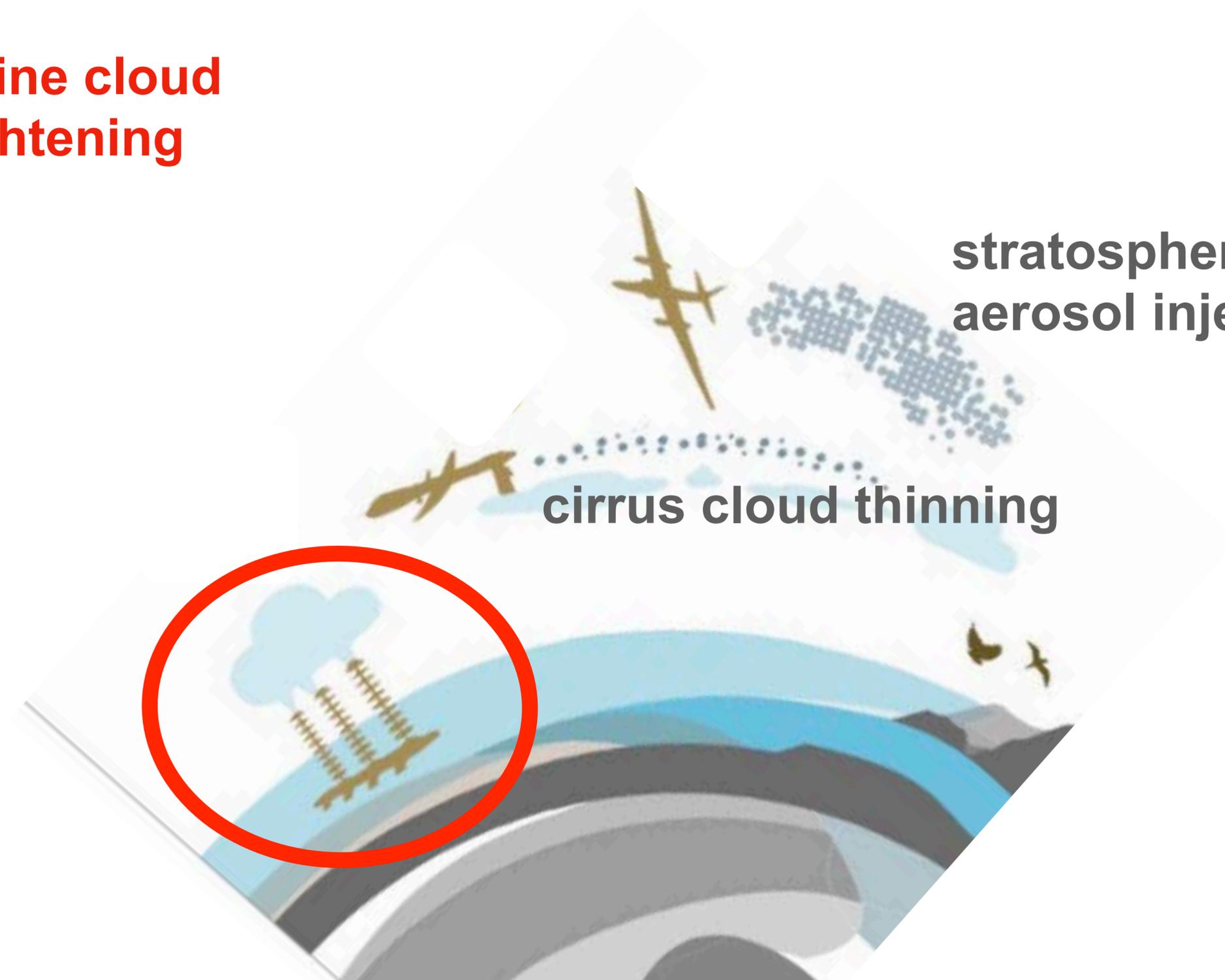


Key SRM approaches

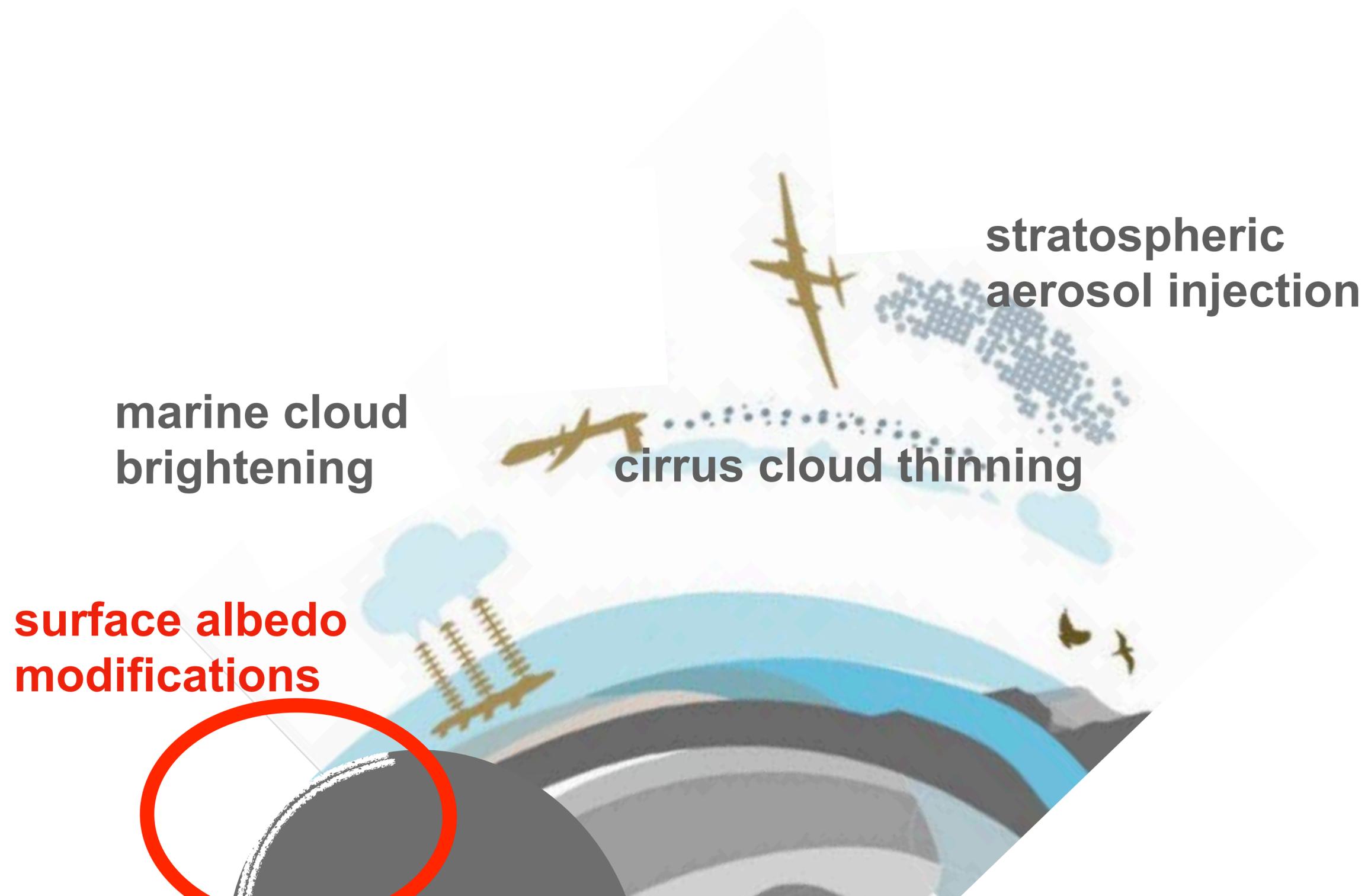
**marine cloud
brightening**

**stratospheric
aerosol injection**

cirrus cloud thinning



Key SRM approaches



Different altitudes

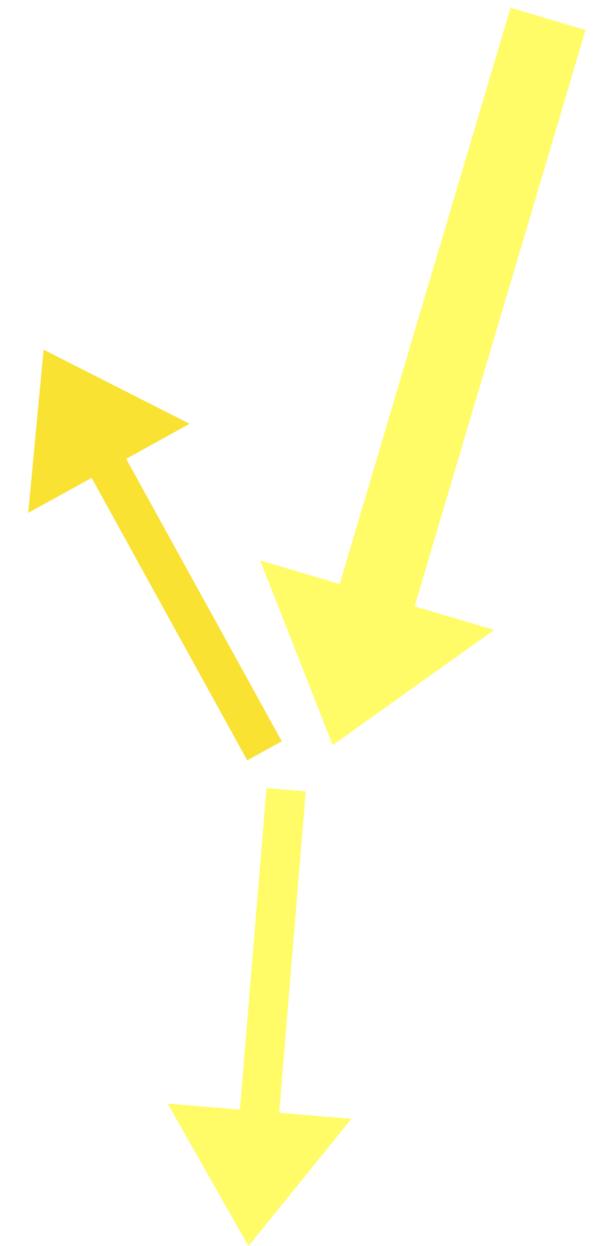
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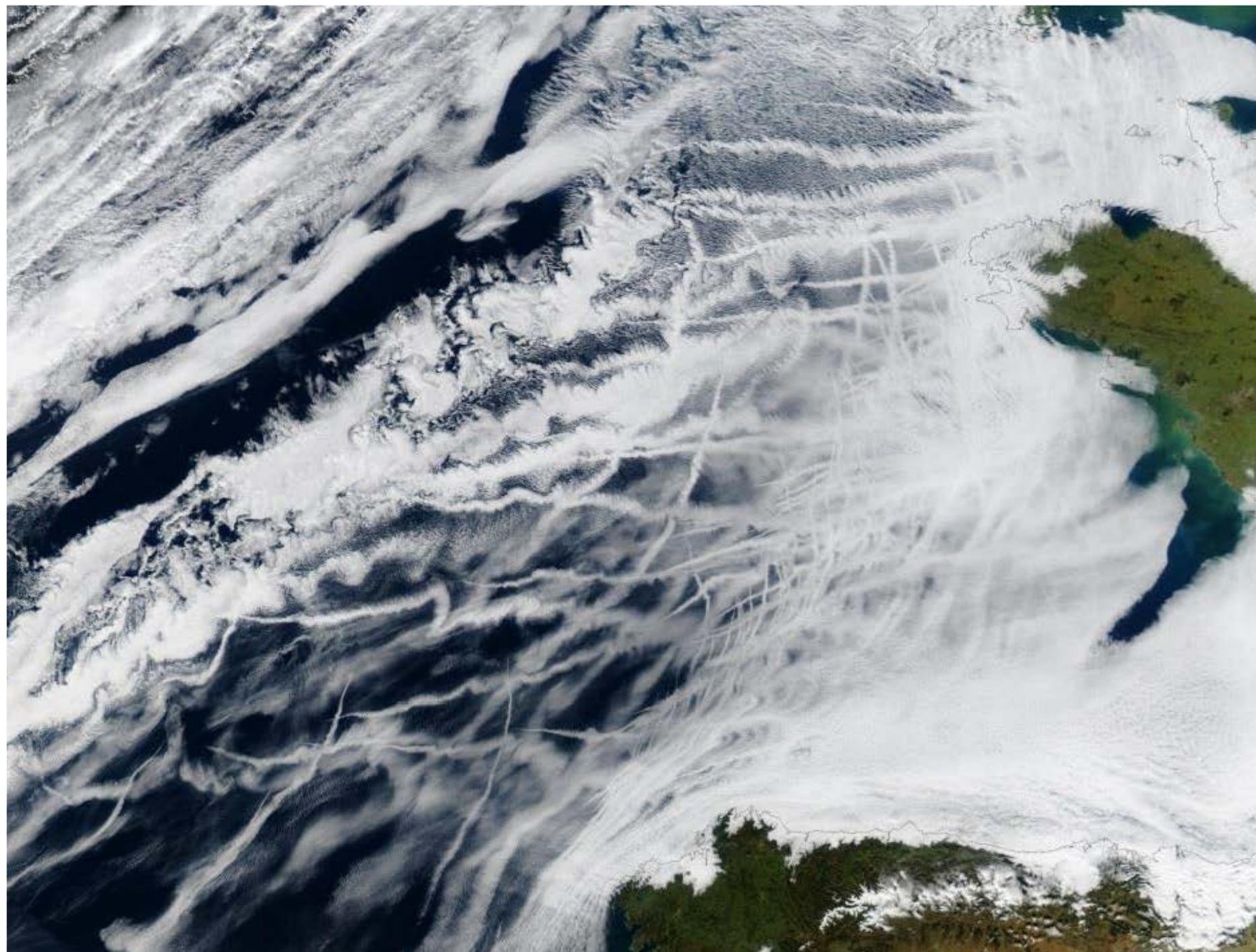
**marine cloud
brightening**

**surface albedo
modifications**

20km
5-13km
100m
0m

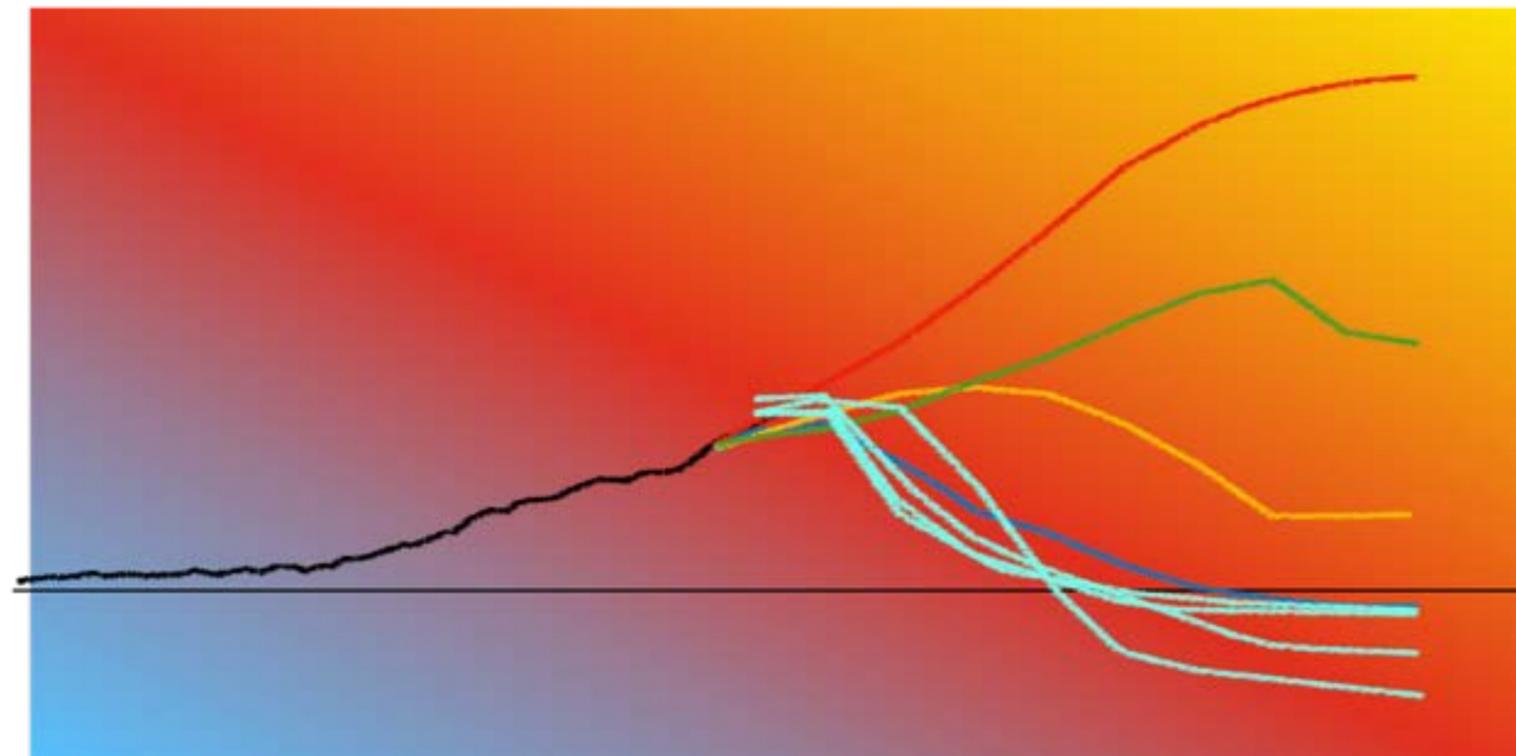


Reflection affects temperature

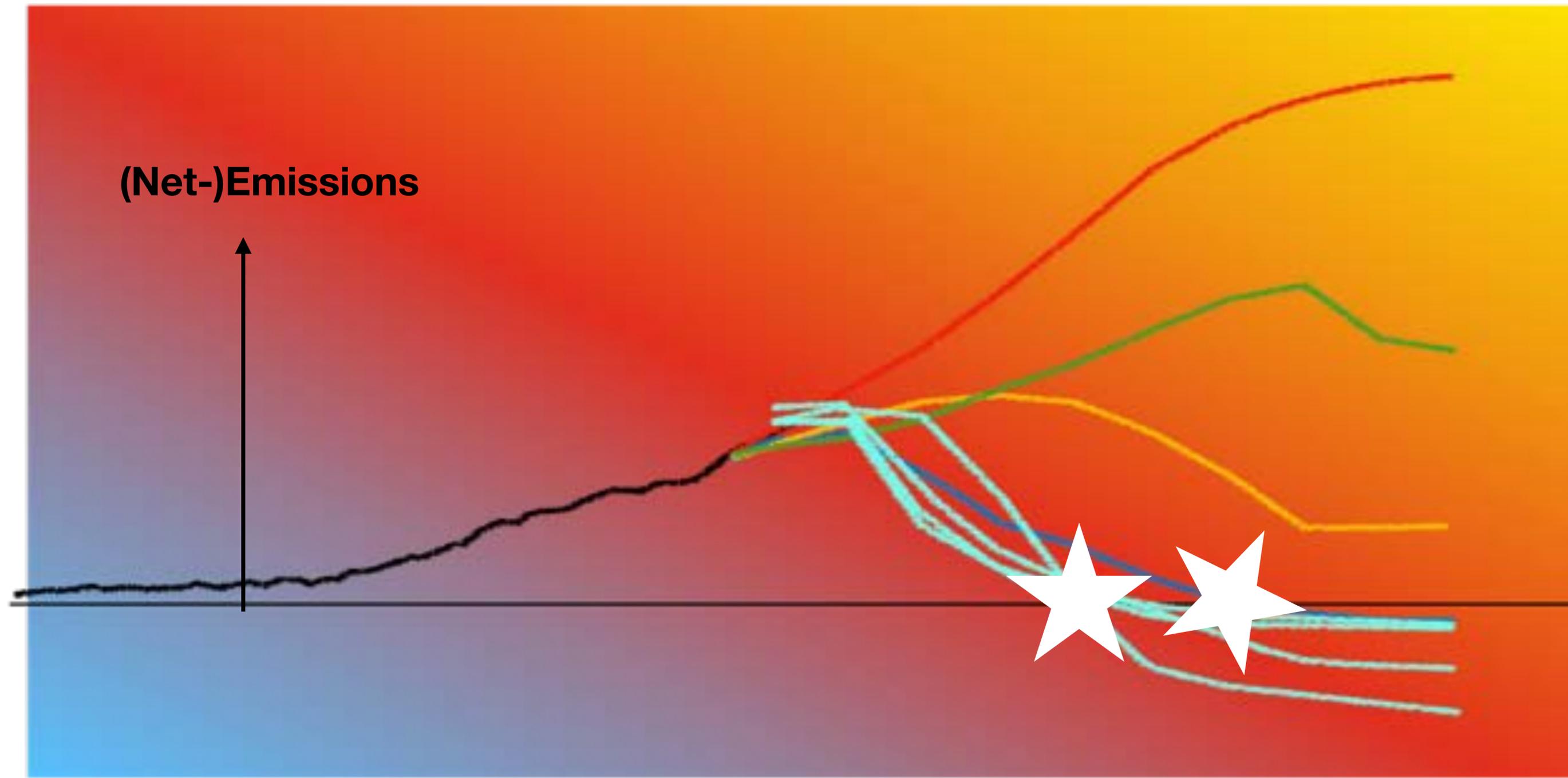


What SRM could/not achieve?

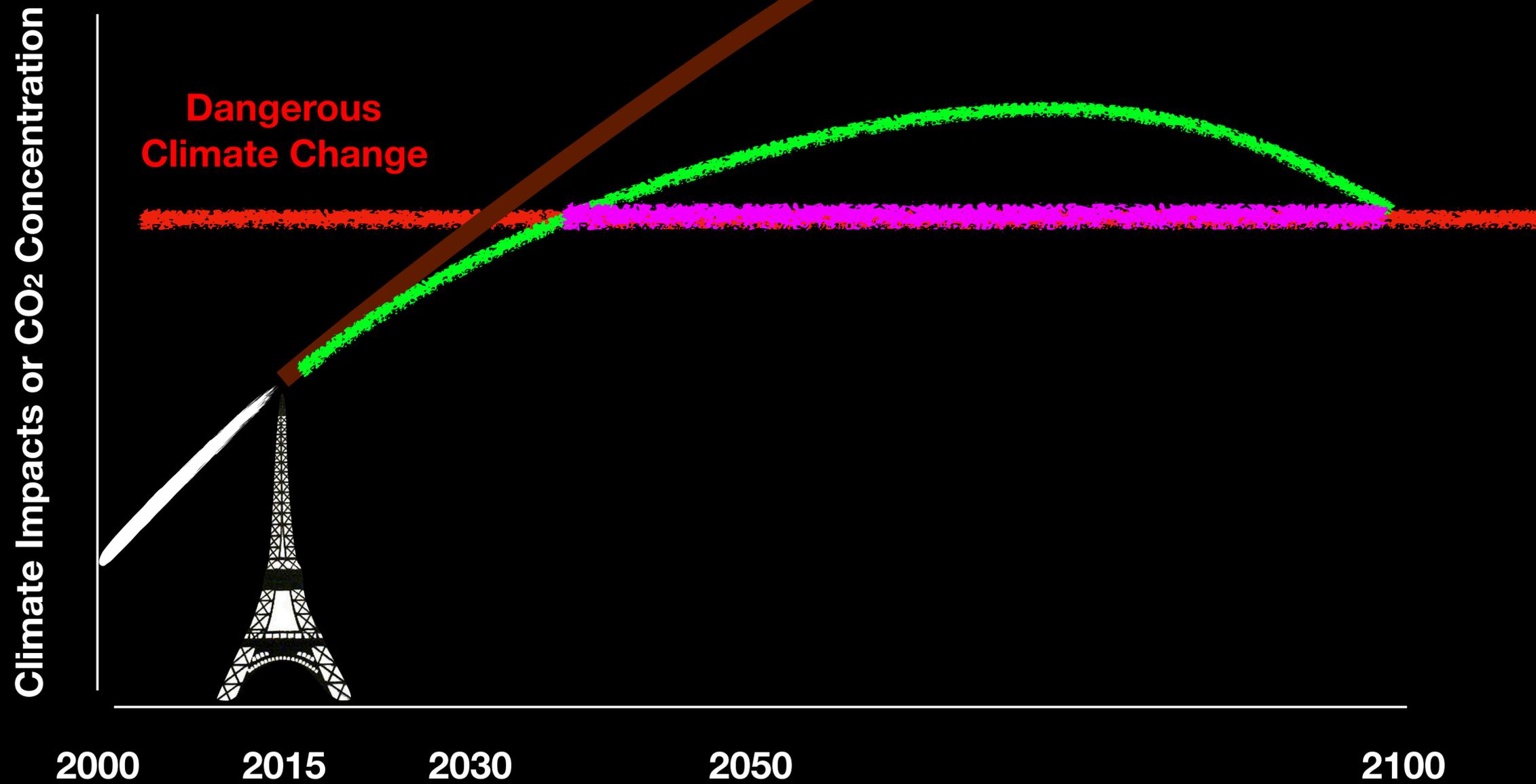
- Mitigation is priority: SRM cannot replace
 - rapid and deep reductions in GHG emissions
 - removal of CO₂ already in the atmosphere



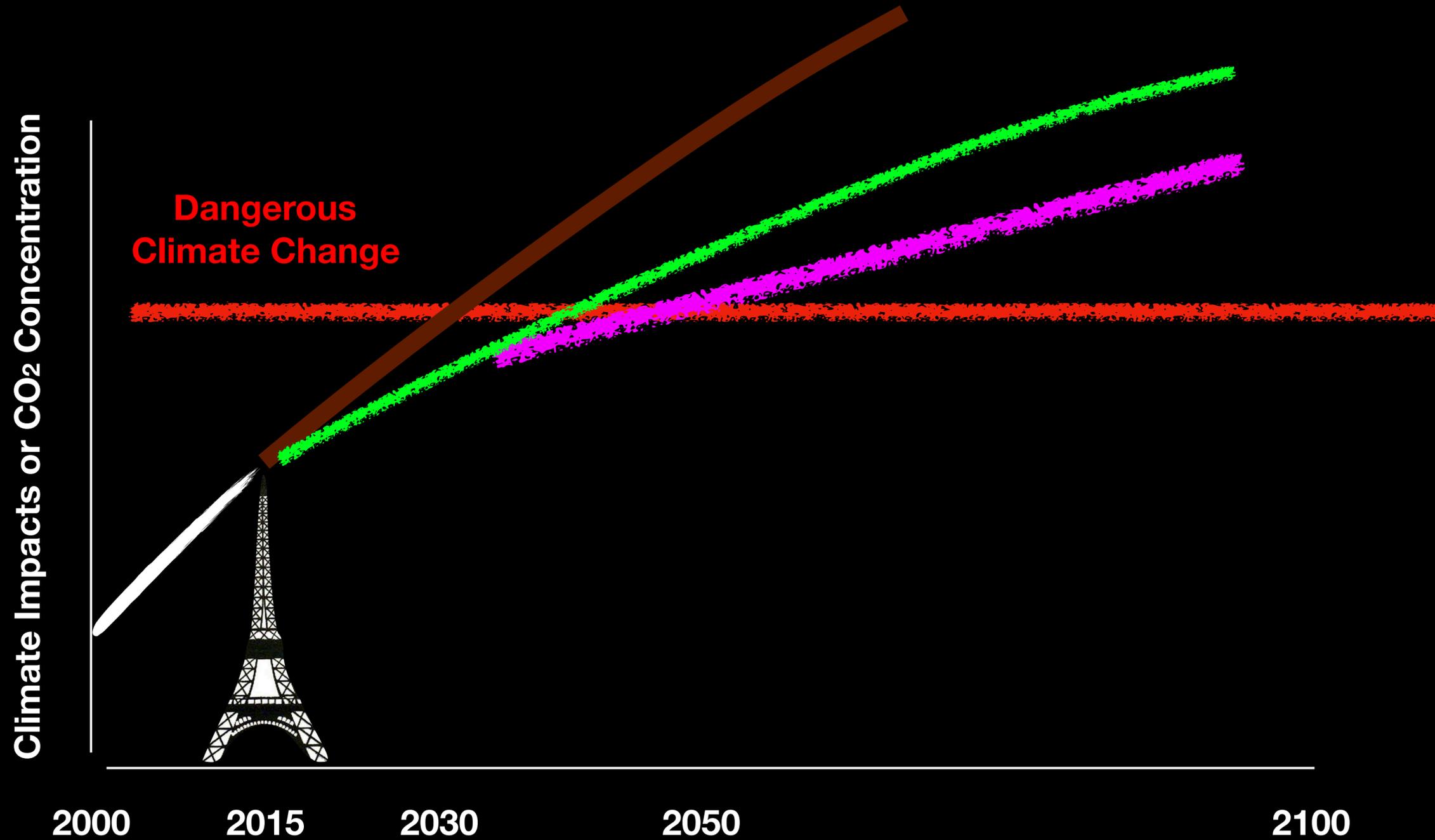
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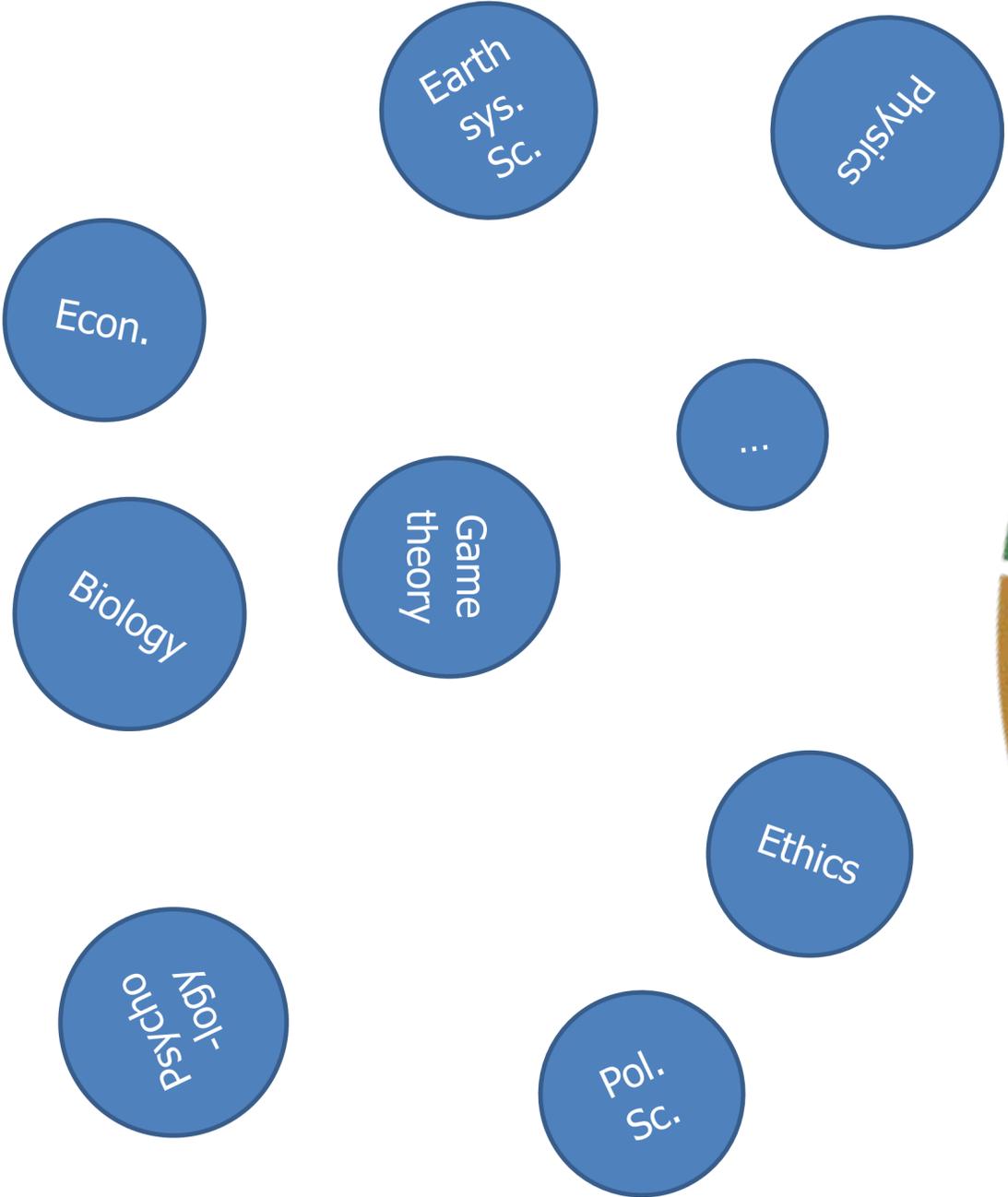
Solar Radiation Management



Solar Radiation Management



Scattered scientific evidence

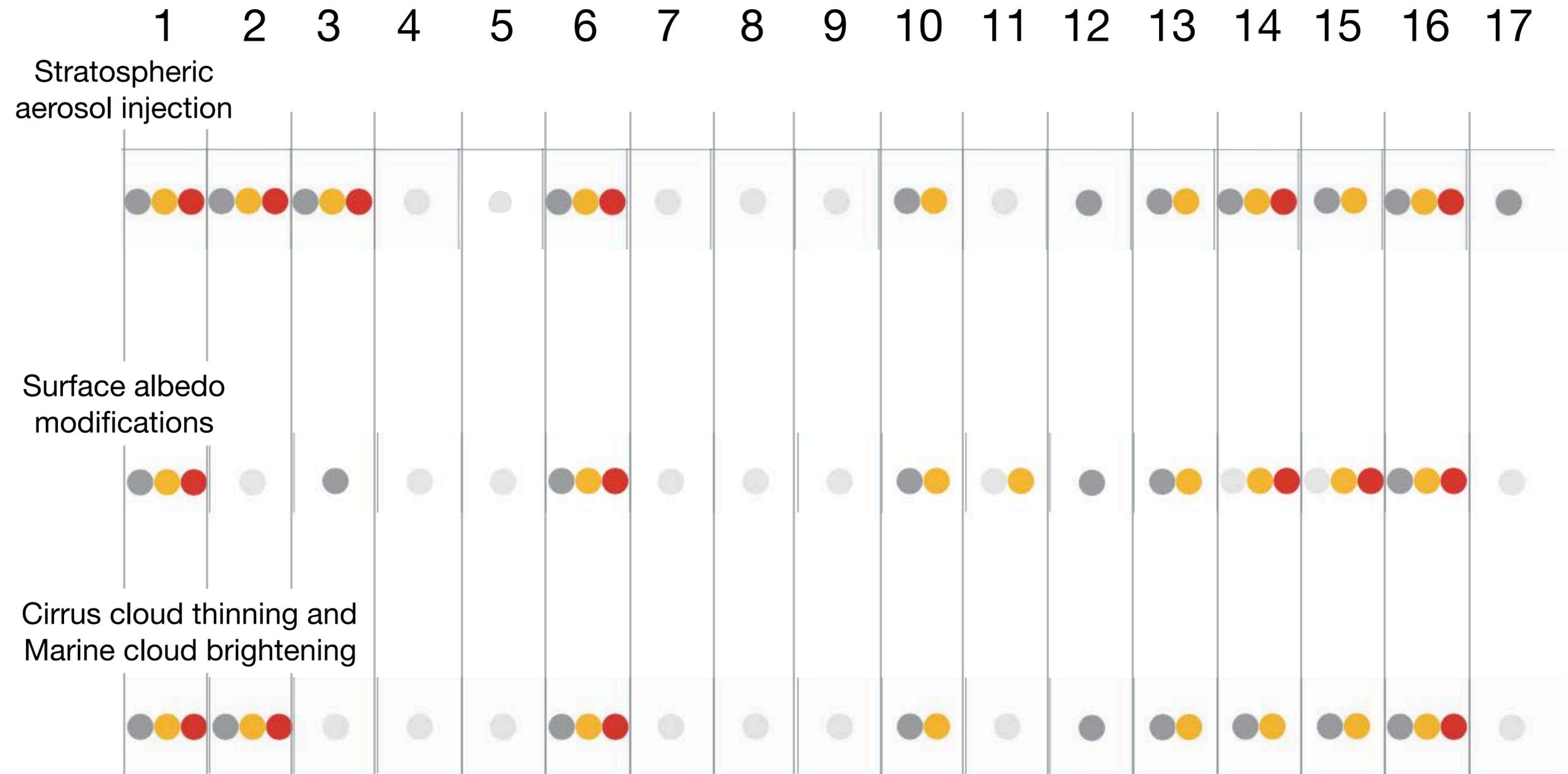


Multiple societal objectives





Knowledge, gaps, risks and +/- interactions







SDG-1: End poverty in all its forms everywhere

- Challenges in **ensuring participation** as well as **deployment side-effects** might affect poorer populations disproportionately.
- SRM could in the best-case scenario help directly maintain conditions that **avoid some of the threats of climate change** to the poorest and most vulnerable.
- Pursuit of SRM could have positive and negative indirect effects on **spending to eradicate poverty**



SDG-17: Strengthen the means of implementation and revitalize the global partnership for Sustainable Development

- Regional redistribution of side-effects of SRM could challenge **trust and collaboration** in international institutions.
- The emergence of new **coordination challenges** requiring global cooperation could foster public deliberation and inter-agency collaboration.
- Implications of SRM on global partnerships and governance requires **engaging various perspectives** and novel ways to strengthen **inclusivity**.

Some relevant publications

- Report on the SDG implications of CDR and SRM: <https://www.c2g2.net/geoeng-sdgs/>
- Forthcoming publication on SDG implications of SRM (get in touch with me)
- IASS Fact Sheet on SRM: https://ce-conference.org/system/files/documents/online_iass_factsheet_02_2017_en_171002.pdf
- IRGC Report: International governance issues on climate engineering: [https://infoscience.epfl.ch/record/277726/files/IRGC\(2020\)_International%20governance%20issues%20on%20climate%20engineering%20Information%20for%20policymakers.pdf](https://infoscience.epfl.ch/record/277726/files/IRGC(2020)_International%20governance%20issues%20on%20climate%20engineering%20Information%20for%20policymakers.pdf)
- Governance of the deployment of solar geoengineering: <https://www.c2g2.net/wp-content/uploads/Harvard-Project-Solar-Geo-Governance-Briefs-181126.pdf>

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