

# Sun-dimming is the new climate colonialism, and the UK is funding the runway

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Solar geoengineering is moving from academic debate into political infrastructure. It is being advanced as a security and profit project for a world that refuses to phase out fossil fuels and treats mass harm as governable. For Palestinians, this is familiar: powerful actors treating our lives as damage control, bypassing consent, and rebranding domination as a humanitarian mission. Sun-dimming is being built in that world, not outside it.

The UK government says it is not in favour of solar radiation management and has no plans to deploy it. Yet through its Advanced Research and Invention Agency's (ARIA) "Exploring Climate Cooling" programme, it has committed £57 million to outdoor experiments that make sun-dimming politically normal. This is how normalisation works — capability is built and routinised before democratic authorisation is even possible.

That logic connects directly to Stardust Solutions, a US-registered firm led by former Israeli government physicists, which has raised \$75 million to commercialise stratospheric aerosol injection as a purchasable service. It is seeking patents, pursuing government contracts, and moving toward outdoor field trials — the details of which remain secret under non-disclosure agreements. Its seed funding came from AWZ Ventures, a firm with documented ties to Israeli military and intelligence infrastructure, and describes them as its own partners and strategic advisers, mostly including former senior figures from agencies such as the CIA and MI5, alongside Israeli intelligence units and services.

ARIA is not funding Stardust directly. It is doing something with longer consequences: building the political and technical runway that makes Stardust's commercial ambitions viable. Public money legitimises the field. Private capital then encloses it.

The question is simple and unavoidable: who will own the capacity to cool, who will be forced to live under it, and what will be sacrificed to keep it running?

## **Weaponising the stratosphere**

Stratospheric aerosol injection works by dispersing particles high in the atmosphere to reflect a small fraction of sunlight back into space. In theory, it can lower global average temperatures. In practice, it leaves fossil fuel extraction untouched, leaves ocean acidification untouched, and leaves ecological collapse driven by extraction untouched. It does not cure the disease. It masks a symptom.

And because particles fall out of the sky, any intervention requires repeated injection. This is not a one-off "fix". It is a recurring obligation, like a global subscription you cannot cancel. Once begun, it is not a policy you can pause without consequences.

This technology's central political issue is its physics. A system that requires continual maintenance has a price. It can be withheld, weaponised, or turned into an entitlement for those who can pay. Commercialisation is not a neutral funding choice. It is a power structure being assembled in advance.

Reporting describes Stardust as building a three-part system: a proprietary sunlight-scattering particle, aircraft-mounted dispersal equipment designed to inject it at altitude, and monitoring and verification tools intended to track where the material goes. The company says it will not disclose the particle's composition until it secures intellectual property protection. Secrecy is not incidental. It is the business model.

That secrecy forces the world into a politics of speculation. Regulators cannot scrutinise what they cannot see, and the public cannot consent to what it cannot evaluate. Supporters cannot defend what they cannot verify, and opponents are pushed toward worst-case assumptions. A hidden ingredient in a recipe for the sky does not reduce controversy. It manufactures it.

If that capability is feasible, then the political question is not whether someone can build it. The question is who defines the rules, whose risk counts, and who absorbs the disruption when the models are wrong. Global average temperature is not a moral equaliser. Power decides what is "acceptable".

A sustained stratospheric program would depend on high-altitude aviation capacity, sovereign airspace permissions, and protected logistics. That concentrates leverage in the hands of a few states and makes "global consent" structurally difficult; you cannot vote on a fleet. You cannot equalise airspace with a stakeholder workshop.

This is why commercialisation is inseparable from geopolitics. It converts the atmosphere into infrastructure, and infrastructure into leverage. The sky becomes another domain where capacity is treated as authority.

Any technology that alters planetary systems becomes a security issue. Solar geoengineering sits inside atmospheric control, strategic stability, and geopolitical power. Stardust's seed funding included AWZ, a venture firm that touts its links to Israel's defence innovation ecosystem. Even if the company claims operational independence, the funding landscape matters. It shapes incentives and acceptable risk.

Solar geoengineering also invites securitisation because it requires surveillance and enforcement. It requires monitoring the stratosphere, tracking particle dispersion, modelling regional impacts, and anticipating backlash. It raises questions about unilateral action, retaliation, and escalation. It also creates monitoring infrastructures that powerful states will insist on controlling, because "verification" is never neutral when it sits inside power.

The pathway here is familiar. Public science reduces uncertainty. Private firms enclose value through patents. Governments become customers through procurement. Stardust has tried to borrow legitimacy through outside advisers and to press for regulation that can double as market entry. Regulation can be a brake. It can also be a gate.

In practice, "governance" can become a route to vendor certification and contracts, channelling political decisions into expert processes that most people cannot contest. The public is invited to watch the procedure, not to decide the direction. Atmospheric intervention becomes infrastructure, and infrastructure becomes leverage.

## **Gaza is not the footnote; Gaza is the warning**

Gaza shows what happens when international law depends on the consent of the powerful. Atrocity becomes normalised through procedure, contracts, and bureaucracy. It does not look like chaos from the inside. It looks like administration. That is the political environment in which sun-dimming would be advanced.

This is not a claim that Gaza is a literal test site for solar geoengineering. It is a claim about the world in which solar geoengineering will be advanced: a world where enforcement collapses upward, where impunity travels through institutions, and where those most affected are asked to accept "risk management" as a substitute for justice.

For decades, Palestinians have lived under regimes where decisions are made elsewhere and imposed as a technical necessity. That is why sun-dimming reads as climate colonialism. It extends the same vertical logic into the sky. Control moves upward. Accountability disappears. Vulnerability is treated as a manageable externality.

British imperial and later Israeli authorities governed Palestinian life through oil pipelines, refineries, and electricity grids, and managed scarcity as a form of control. Sun-dimming extends that formation from the ground into the sky.

The UK government says it is not in favour of SRM and has no plans to deploy it, but ARIA has committed millions, including support for outdoor field experiments. Such activities do not signal caution, and instead show a mere institutional distance from deployment while building the foundations for it.

By funding outdoor experiments framed as research infrastructure rather than deployment, ARIA shifts the baseline. Field testing converts solar geoengineering from a speculative debate into operational capability. Once capability exists, crisis politics will not ask whether we should have built it. It will ask who can scale it fastest, who can supply it, and who can “manage the risk”.

Ethics panels and public engagement processes can easily become procedural cover. They can manage dissent while leaving the direction unchanged. That is a familiar mode of governance in an era where impunity and extraction thrive.

The UK’s posture creates structured optionality. It maintains a political distance while investing in technical readiness. When crisis politics intensifies, readiness becomes justification. What was framed as “exploration” becomes the basis for “inevitability”.

Solar geoengineering is often described through global averages. Impacts do not arrive as averages. They arrive regionally, unevenly, and through power.

Stratospheric aerosol injection alters radiative balance at planetary scale. Climate modelling indicates the intervention can shift precipitation patterns across regions. Research suggests heightened rainfall variability risks in parts of the Sahel and South Asia under some deployment scenarios. Even when global temperature stabilises, hydrological disruption can be uneven.

This is intrinsic to the intervention. It is not a manageable “side effect” that better messaging can fix. It is a distributional gamble imposed on those with the least power over the decision. The regions most exposed to rainfall disruption and least able to veto powerful states’ actions are the ones likely to bear the risk.

Some proponents cite the Montreal Protocol as proof that global atmospheric governance can succeed. That analogy flatters the project. Phasing out a discrete class of chemicals is categorically different from initiating a permanent planetary management regime requiring continuous reinjection, continuous monitoring, and continuous political agreement. One closes a tap. The other installs a machine that must never stop.

## **Global South leadership towards binding non-use agreements**

So what must happen? Not another expert process that launders inevitability. This is a political choice, and it has to be fought as one, across every financial, academic, and political chokepoint that makes sun-dimming possible

For-profit solar geoengineering is a predictable output of market-based climate governance. The response has to be equally structural. Governments should adopt explicit non-use positions and prohibit commercial solar geoengineering, including bans on patenting stratospheric aerosol technologies. If private ownership of the means to manage the global atmosphere is unacceptable, then commercial enclosure must be stopped before it becomes normalised.

Governments should impose moratoria on outdoor stratospheric testing. No field experiments should proceed without democratic authorisation, and no global consent architecture exists. “Small” experiments geared toward technology development are not neutral. They are steps along a deployment pathway.

Universities and public funders must draw hard firewalls. Disclosure must be mandatory for funding, contracts, partnerships, and intellectual property related to solar geoengineering. Public money should not subsidise the commercialisation of atmospheric intervention, and institutions should refuse participation in outdoor stratospheric aerosol experiments that build proprietary capability.

Global South leadership already points toward a workable route: coordinated non-use positions and domestic restrictions that harden into international norms, as African ministerial processes have already signaled. It is not “idealism” to insist on non-use. It is realism in a world where power moves first and writes the rules after.

In a political economy where mass atrocity proceeds without enforcement and fossil expansion continues despite decades of negotiation, faith in equitable governance of atmospheric intervention is misplaced. The sky cannot be turned into a market instrument. It cannot become another domain where power decides who absorbs the consequences.