

As climate talks sputter, UN scientists vet 'Plan B'

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On the heels of another halting round of talks on climate change, UN scientists this week will review quick-fix options for beating back the threat of global warming that rely on technology rather than political wrangling.

Experts from the [Intergovernmental Panel on Climate Change](#) (IPCC), meeting for three days from Monday in the Peruvian capital Lima, will ponder "geo-engineering" solutions designed to cool the planet, or at least brake the startling rise in Earth's temperature.

Seeding the ocean with iron, scattering heat-reflecting particles in the stratosphere, building towers to suck carbon dioxide (CO₂) out of the atmosphere, and erecting a giant sunshade in space are all on the examining table.

Critics say such schemes -- some of which have been tested experimentally -- are a roll of the dice with Earth's [climate system](#) and its complex web of biodiversity.

And even if one problem is solved, they argue, it may be impossible to anticipate knock-on effects and unintended consequences.

There is a political danger as well, [climate policy](#) experts caution: the prospect of a quick fix to [global warming](#) could weaken an already fragile global consensus on the need to reduce [greenhouse gases](#) or subvert complicated methods for measuring emissions cuts.

"It's a convenient way for Northern governments to dodge their commitments to emissions reduction," said Silvia Ribeiro of the ETC Group, a technology watchdog group.

Last week, more than 100 organisations, including ETC and Friends of the Earth, sent an open letter to the IPCC "demanding a clear statement of its commitment to precaution and to the existing international moratorium on geo-engineering."

Only four years ago, in its landmark Fourth Assessment Report, the IPCC dismissed geo-engineering in a brief aside as charged with potential risk and unquantified cost.

But now the Nobel-winning panel is taking a closer look, a telling sign, for some, that the effort to tackle global warming through politics is taking too long and bearing too little fruit.

Delegates ended another 12-day talkfest in Bonn on Friday under the UN Framework Convention on [Climate Change](#) (UNFCCC), still deeply riven over who should cut their emissions, by how much and when.

Current pledges fall far short of holding temperature rise in check below 2.0 degree Celsius (3.6 degrees Fahrenheit) compared with pre-industrial levels, a widely accepted threshold for safety.

IPCC officials defend the new review on several grounds.

To begin with, it is what members of the 194-nation intergovernmental body asked for, said Jean-Pascal van Ypersele, a leading Belgian scientist and vice chair of the IPCC.

"My concern is to fulfill an IPCC mandate to provide the best information available to take informed decisions to protect the climate

and the environment," he said by telephone.

"We will look at the advantages and possibilities, but we will also look at the potentially negative aspects."

The experts meeting Monday, he added, review the state of scientific knowledge but do not make policy recommendations.

"In the absence of an objective IPCC assessment, the only information available to policy makers would be from quite a diverse range of sources, some of which might have an interest at stake," he said.

Geo-engineering schemes can be as simple as planting trees to absorb CO₂ or painting flat roofs white to reflect sunlight back into space, a technique already in use in many sun-baked urban settings.

They also include scattering sea salt aerosols in low marine clouds to render them more mirror-like, sowing the [stratosphere](#) with reflective sulphate particles, or "fertilising" the ocean surface with iron to spur the growth of micro-organisms that gobble up CO₂.

At the sci-fi end of the scale is a proposal -- which exists, for now, only on paper -- for a sunshade positioned at a key point between Earth and the Sun that would deflect one or two percent of solar radiation, turning the planet's thermostat down a notch.

In an analysis published in September 2009, the Royal Society, Britain's academy of sciences, judged that planting forests and building towers to capture CO₂ could make a useful contribution -- once they are demonstrated to be "safe, effective, sustainable and affordable."

It also noted that blunting the impact of solar radiation would still not lower atmospheric concentrations of CO₂, which is also driving ocean

acidification.

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