

Scientists criticise handling of pilot project to 'geoengineer' climate

Advisers call into question decision to announce test date before sufficient public discussion of the project's implications



The project will test the feasibility of injecting particles into the atmosphere to reflect some of the sun's energy. Photograph: Gallo Images/Getty Images

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Governance of the UK's first geoengineering project, which aims to inject particles into the stratosphere to cool the planet, is in need of improvement and researchers should have done more to explain its aims to NGOs and the public, say scientists.

The date and location for the controversial pilot project were announced with great fanfare at the British Science Festival in September, but the scientific advisers to its funding council have criticised the decision to make the test date public before sufficient public discussion about the nature and future implications of the project.

Writing in the journal *Nature*, Prof Phil Macnaghten, chair of the advisory panel, and Prof Richard Owen, architect of the project's governance process, said that aspects "could have been improved".

"It is vital that we make space to listen to and discuss these questions, and that the debate transparently influences the decisions that are taken," they wrote.

The Stratospheric Particle injection for Climate Engineering or Spice Project is aimed at testing a method of mitigating the effects of manmade climate change by mimicking the cooling effect of volcanic eruptions. The project is backed by the government-funded Engineering and Physical Science Research Council (EPSRC), and involves scientists from Cambridge, Oxford, Reading and Bristol universities. They plan to investigate whether a giant balloon and a 20km long hosepipe can inject particles into the stratosphere to reflect some of the sun's energy so reducing warming of the Earth's surface.

The planned first test involved pumping 150 litres of water into the air to study whether the engineering of the project was feasible. The date and timing of the first test was unveiled publicly on 14 September but just two weeks later on 29 September the EPSRC announced that the project was being delayed for six months to "allow time for more engagement with stakeholders".

The project had attracted a forceful protest campaign from NGOs such as Friends of the Earth and ETC group. A petition signed by more than 50 organisations was handed in the same day as the decision to pause the project was announced by the EPSRC. They objected to the project in part because they feared that a "plan B" approach of engineering the climate will offer politicians an excuse for not taking tough decisions on reducing greenhouse gas emissions from burning fossil fuels such as oil, coal and gas.

"There may have been other reasons for pausing the project, I don't know, but certainly the outcry from Friends of the Earth and others undoubtedly would have made them sit back and think," said Mike Childs, head of policy, research and science at Friends of the Earth.

The principal investigator on the project, Matthew Watson, denied that the decision to postpone it was a direct result of the outcry from green groups: "I'm glad the environmental movement have a strong voice," he said, "but the decision was made before any of the really deep green movement got involved." A review of the project two months earlier had concluded that without more public engagement it could not go ahead.

Now the first test of the technology will be put on hold until a second review meeting approves the stakeholder engagement the researchers have done in the intervening time. "We've developed a plan and begun initial discussions with these NGOs so we can get round a table and talk," said Watson.

The controversy surrounding the project is unlikely to fade away. "I think it's a lightning rod for people who don't think it's a good idea and naturally they think the scientists involved want to see this through to deployment and that really isn't the case at all," said Watson. He is not an enthusiast for geoengineering as a policy option and believes that cutting greenhouse gas emissions should be the top priority.

"If the politicians came back from [international climate talks in] Durban with a legally binding agreement on CO₂ emission reduction of some meaning ... that would make research projects like

Spice much less important," said Watson. "But each time they don't, when they think of political rather than geological timescales and they think about being re-elected or putting the economy first at any cost then that just makes research into geoengineering even more necessary."

. This article was amended on 17 November 2011 to identify Matthew Watson, principal investigator on the Spice project.

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