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## The Regulation of Geoengineering - Science and Technology Committee [Contents](#)

### Summary

Geoengineering describes activities specifically and deliberately designed to effect a change in the global climate with the aim of minimising or reversing anthropogenic (that is human caused) climate change. Geoengineering covers many techniques and technologies but splits into two broad categories: those that remove carbon dioxide from the atmosphere such as sequestering and locking carbon dioxide in geological formations; and those that reflect solar radiation. Techniques in this category include the injection of sulphate aerosols into the stratosphere to mimic the cooling effect caused by large volcanic eruptions.

The technologies and techniques vary so much that any regulatory framework for geoengineering cannot be uniform. Instead, those techniques, particularly carbon removal, that are closely related to familiar existing technologies, could be regulated by developing the international regulation of the existing regimes to encompass geoengineering. For other technologies, especially solar refraction, new regulatory arrangements will have to be developed.

There are three reasons why, we believe, regulation is needed. First, in the future some geoengineering techniques may allow a single country unilaterally to affect the climate. Second, some—albeit very small scale—geoengineering testing is already underway. Third, we may need geoengineering as a "Plan B" if, in the event of the failure of "Plan A"—the reduction of greenhouse gases—we are faced with highly disruptive climate change. If

we start work now it will provide the opportunity to explore fully the technological, environmental, political and regulatory issues.

We are not calling for an international treaty but for the groundwork for regulatory arrangements to begin. Geoengineering techniques should be graded with consideration to factors such as trans-boundary effect, the dispersal of potentially hazardous materials in the environment and the direct effect on ecosystems. The regulatory regimes for geoengineering should then be tailored accordingly. The controls should be based on a set of principles that command widespread agreement—for example, the disclosure of geoengineering research and open publication of results and the development of governance arrangements before the deployment of geoengineering techniques.

The UN is the route by which, eventually, we envisage the regulatory framework operating but first the UK and other governments need to push geoengineering up the international agenda and get processes moving.

This inquiry was innovative in that we worked collaboratively with the US House of Representatives Science and Technology Committee, the first international joint working of this kind for a House of Commons select committee. We found the experience constructive and rewarding and, we hope, successful. We are enthusiastic supporters of collaborative working between national legislatures on topics such as geoengineering with international reach. Our Report covering the regulation of geoengineering will now dovetail into a wider inquiry that the House of Representatives Committee is carrying out on geoengineering. Science, technology and engineering are key to solving global challenges and we commend to our successor committee international collaboration as an innovative way to meet these challenges.

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