

PRESS RELEASE:

‘Oxford Principles’ provide a code of conduct for geoengineering research

For immediate release

(Oxford, 14 September 2011)

The threat of climate change has led academics and policy makers to begin to explore geoengineering – the deliberate, large-scale intervention in the Earth’s natural systems to counteract global warming. Recent news that an experiment will be undertaken to assess a potential delivery mechanism for a geoengineering technique (SPICE Project - <http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/I01473X/1>) draws attention to the need to create adequate governance arrangements for the research, and potential deployment, of such techniques. As a first step, a global code of conduct for research relating to geoengineering is urgently required.

The ‘Oxford Principles’ provide the basis for such a code. A set of principles for the conduct of geoengineering research drafted by a UK-based team of scholars and presented to the House of Commons Science and Technology Select Committee’s report on “The Regulation of Geoengineering” (<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsctech/221/221.pdf>), they are:

1. Geoengineering to be regulated as a public good.
2. Public participation in geoengineering decision-making.
3. Disclosure of geoengineering research and open publication of results.
4. Independent assessment of impacts.
5. Governance before deployment.

These principles were endorsed by the Committee (with a recommendation that they be developed further) and by the government in their response to the committee’s recommendations. They also formed the basis of the principles agreed at the Asilomar International Conference on Climate Intervention Technologies (<http://climateresponsefund.org/images/Conference/finalfinalreport.pdf>) in March last year. The need now is to further develop such governance arrangements in an international context and with broad engagement to ensure that such research has a social licence to operate.

“Adoption of a code of conduct built on the Oxford Principles would help mitigate the major environmental, social and knowledge risks associated with geoengineering” said Tim Kruger, James Martin Fellow at the Oxford Geoengineering Programme at the University of Oxford.

The Oxford Principles are already being used by people working in this area. The Research Councils put a stage-gate into the funding of the SPICE Project to ensure that public dialogue

and consideration of the ethical issues associated with the experiment were demonstrated through an independent piece of public engagement research (<http://psych.cf.ac.uk/understandingrisk/docs/spice.pdf>) before the go-ahead was given for the test to proceed.

The Oxford Principles, or whatever develops out of them through interaction with society, can be transformed into a code of conduct for geoengineering research. Agreement to such a code of conduct should become a necessary condition of funding for such research going forward.

The Oxford Geoengineering Programme is an innovative interdisciplinary research initiative and member of the Oxford Martin School, at the University of Oxford.
<http://www.oxfordmartin.ox.ac.uk/institutes/geoengineering/>

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Note to editors:

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For enquiries about the public engagement aspects of geoengineering please contact Professor Nick Pidgeon of Cardiff University at Pidgeonn@cardiff.ac.uk or by calling the Cardiff Press Office at 029 208 79074.

For enquiries about the international legal aspects of geoengineering please contact Professor Catherine Redgwell of UCL at c.redgwell@ucl.ac.uk or by calling 020 7679 1459

The other two authors, Professor Steve Rayner and Professor Julian Savulescu both of the University of Oxford are currently travelling and unable to take enquiries.

About the ‘Oxford Principles’ authors:

- **Steve Rayner** is James Martin Professor of Science and Civilisation and Director of the Institute of Science, Innovation and Society, a member of the Oxford Martin School at the University of Oxford. His expertise is in the relationship between science and society and he was a member of the Royal Society’s working group on geoengineering.
- **Catherine Redgwell** is Professor of International Law at University College London. Her expertise is in the fields of international energy law and international environmental law and she was also a member of the Royal Society’s working group on geoengineering.
- **Julian Savulescu** is Professor of Practical Ethics and Director of the Institute of Science and Ethics, a member of the Oxford Martin School at the University of Oxford. His expertise is in the fields of new technologies and ethics.
- **Nick Pidgeon** is Professor of Psychology at Cardiff University. His expertise is in the field of risk— its perception, communication and management—and public engagement with science and technology.
- **Tim Kruger** runs the Oxford Geoengineering Programme, a multidisciplinary initiative of the Oxford Martin School at the University of Oxford. His expertise is in the technical aspects of geoengineering.

About the Oxford Geoengineering Programme at the Oxford Martin School

The Oxford Geoengineering Programme (OGP) is a unique interdisciplinary research initiative that brings together expertise in the areas of natural sciences, engineering, ethics and governance to assessing the social and technical aspects of proposed geoengineering techniques.

The OGP aims to conduct a sincere, thorough and transparent engagement with society about geoengineering. Three of the five authors of the Oxford Principles are directly associated with the OGP and the further development of the principles is one of the key aims of the Programme.

The OGP is a member of the Oxford Martin School, an interdisciplinary research initiative at Oxford University tackling the challenges of the 21st century.

<http://www.oxfordmartin.ox.ac.uk/institutes/geoengineering/>

Risks associated with geoengineering research:

- **Environmental risks** from known or unknown consequences of experiments can be mitigated by performing small-scale experiments in the laboratory before any intervention in the open - in a similar way pharmaceutical research for a new drug goes through a series of trials - only when it is established that it is sufficiently safe when tested in a contained laboratory setting can research progress to further trials.
- **Social risks** arise from the interpretation of such experiments. Some people will wish to see geoengineering research as an excuse to delay reducing emissions. It is important that those working in the field of geoengineering are clear that it is no panacea for climate change and express that clearly in their interactions with the media and society. Emission reductions are essential - geoengineering research is required because, while essential, reductions alone may not be sufficient to avoid dangerous climate change.
- **Knowledge risks** arise from what would happen if we were *not* able to undertake such research. Due diligence suggests that we need to assess the social and technical aspects of all proposed geoengineering techniques to establish which, *if any*, of them could be employed without creating countervailing side-effects. Failure to conduct research may leave us in a situation where some parties might be tempted to view geoengineering as a cheap or fast-acting means to counter climate change and seek to implement an inadequately researched technique. Conversely we may decide not to implement a technique which would have been able to counteract climate change safely, but not do so as we had not conducted adequate research. Either way ignorance could pose an existential threat to our society. There are, of course, knowledge risks which arise from such research. The development of techniques that can intentionally modify the climate opens the Pandora's box of climate manipulation for nefarious purposes. It is essential that such research is carefully monitored and any deployment strictly controlled.