

SRMGI

Solar Radiation Management **Governance Initiative**

PILOT WORKSHOP

“GOVERNING GEOENGINEERING IN THE 21ST CENTURY: ASIAN PERSPECTIVES”

Singapore, 18-19 July, 2011

RELEVANCE

Geoengineering, defined by the UK’s Royal Society as “the deliberate large-scale manipulation of the planetary environment to counteract anthropogenic climate change” (Shepherd et al 2009: 1), is receiving growing attention from scientists, policy makers and the public concerned with the slow progress of international negotiations to reduce emissions of greenhouse gases. However the emergence of geoengineering technologies as a new potential response for ameliorating the human and ecological risks of climate change appears to raise at least as many challenges as it might answer.

Geoengineering techniques can be split into two broad categories. The first category comprises techniques aimed at the removal of carbon dioxide (CO₂) from the atmosphere. An example would be the sequestering and locking of CO₂ in geological formations, which includes direct methods such as CO₂ air capture and indirect methods such as ocean iron fertilisation. The second category consists of techniques to reflect solar radiation, such as the injection of sulphate aerosols into the stratosphere to mimic the cooling effect caused by large volcanic eruptions. Advocates of geoengineering have argued that it “could provide a useful defense for the planet – an emergency shield that could be deployed if surprisingly nasty climatic shifts put vital ecosystems and billions of people at risk” (Victor et al., 2009: 67). However, it could also be argued that introducing geoengineering as the new Plan B to tackle climate emissions may create even greater problems, since the full effects of various geoengineering techniques are not well understood. As with many new technologies there is no general consensus that geoengineering is safe, appropriate or effective. Geoengineering could also be perceived as a moral hazard, as there is the possibility that it could decrease the political and social impetus to reduce carbon emissions. In other words, turning to geoengineering may come across as this generation’s declaration of surrender in addressing one of humankind’s most pressing problems.

The new discourse so far has been driven by scholarly communities in Europe and the United States, without including the perspectives of key regions such as Africa and the Asia-Pacific, which will be significantly affected by climate change. The debate on the risks and opportunities of geoengineering is currently gaining momentum. The Intergovernmental Panel on Climate Change is, for the first time, assessing the scientific basis as well as the potential impacts and side effects of geoengineering proposals in their Fifth Assessment Report, which is scheduled to be finalized in 2014. The Asia-Pacific region needs to participate in this debate.

AIMS AND OBJECTIVES

This pilot workshop examines the threats and opportunities of geoengineering as a new set of emerging technologies to address climate change and the pressing demands of a low carbon economy. It discusses the principles, problems, and prospects of governing geoengineering from the perspective of the Asia-Pacific region. Aims and objectives of the workshop are three-fold:

- a) to explore the way in which geoengineering is framed in Asia-Pacific countries, in relation to climate change mitigation and adaptation;
- b) to map the main national positions on the different geoengineering approaches among those countries in the Asia-Pacific that are likely to be at the forefront of deployment and/or impact;
- c) to analyse the perceived issues and instruments of governance.

In order to identify the governance demands of geoengineering, the workshop aims at addressing the following tentative set of questions, which may guide but should in no way constrain our discussions:

1. What processes do we need to govern geoengineering, from further research to potential deployment?
2. What are the existing legal and institutional mechanisms to govern geoengineering research, development and potential deployment? What would be the optimal regulatory framework?
3. How would we manage the uncontrolled use of geoengineering for peaceful purposes, for example, the preemptive use of solar radiation management techniques by a consortium of countries with threatened coastlines? How would we deal with intended or unintended negative effects?
4. How would we define 'climate emergency' for the purpose of triggering the deployment of geoengineering technology?
5. What are the criteria that would define the success and failure of geoengineering deployment? For example, how would we determine at what level of CO₂ the deployment of geoengineering technologies should cease?

This pilot workshop is organized by the *Centre for Non-Traditional Security Studies*, in co-operation with the Oxford Geoengineering Programme, an initiative of the Oxford Martin School at the *University of Oxford*, and the *Solar Radiation Management Governance Initiative (SRMGI)*, an international NGO project co-convened by *The Royal Society* (UK), *Environmental Defense Fund* (US), and *TWAS (The Academy of Sciences for the Developing*

World). It seeks to open up the geoengineering discourse which has been very much driven by scholarly communities in Europe and the United States thus far. Any potential new global governance framework will likely require broad legitimacy and support by a critical mass of stakeholders. This event therefore aims at engaging key representatives from the academic and policy communities, and civil society in East, Southeast, and South Asia.

TENTATIVE PROGRAMME

Sunday, 17 July, 2011

- Arrival of overseas speakers and participants -

Day 1: Monday, 18 July, 2011

Venue: Lecture Room 4, Education Wing, Nanyang Executive Centre

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| 12.00 – 13.00 | Welcome Lunch for overseas speakers and participants
Venue: Venue: Function Hall 2 Level 4, Education Wing Nanyang Executive Centre |
| 13.00 – 13.30 | Registration of participants
Lecture Room 4
Education Wing, Nanyang Executive Centre |
| 13.30 – 14.00 | <u>Welcome Remarks</u>
Ambassador Barry Desker
Dean, S. Rajaratnam School of International Studies (RSIS),
Nanyang Technological University (NTU), Singapore

Dr Jochen Prantl
Visiting Senior Fellow, RSIS Centre for Non-Traditional Security
Studies, Singapore; Senior Research Fellow, Department of Politics
and International Relations, University of Oxford |
| 14.00 – 15.15 | <u>Session 1: What is Geoengineering? Do We Need It?</u>

Chair:
Assoc. Professor Ralf Emmers
Acting Head, RSIS Centre for Non-Traditional Security Studies,
Singapore

Presenter:
Mr Tim Kruger
James Martin Fellow, Oxford Geoengineering Programme, University
of Oxford |
| 15.15 – 15.45 | Photo Taking and Coffee Break |

- 15.45 – 16.15 **Session 2: The Challenges of Geoengineering Governance**
- Presenter:
Professor Steve Rayner
James Martin Professor of Science and Civilization, University of Oxford
- 16.15 – 16.45 **Session 3: The Importance of Global Public Engagement**
- Presenter:
Jayne Windeatt
Integrated Assessment of Geoengineering Proposals (IAGP), United Kingdom
- 16.45 – 17.00 **Session 4: The Solar Radiation Management Governance Initiative (SRMGI) – A Very Brief Introduction**
- Presenter:
Mr Alex Hanafi
Attorney, Environmental Defense Fund, United States
- 17.00 – 18.00 **Session 5: Showcasing Proposed Geoengineering Techniques**
- Moderator:
Mr Tim Kruger
James Martin Fellow, Oxford Geoengineering Programme, University of Oxford
- Delegates view posters on the proposed techniques
 - Series of six 5-minute videos from experts in each of the techniques
 - Q&A session
- 18.30 – 21.00 Drinks Reception and Dinner. Venue: NV 50 & The Bar @ The Staff Club (Opposite Nanyang Executive Centre) 50 Nanyang View

Day 2: Tuesday, 19 July, 2011

Venue: SMART Classroom - Level B4 via Lift N2-1 or N2-2, Section A, Block N2, North Spine

9.30 – 10.00 **Introduction**

Dr Jochen Prantl
Visiting Senior Fellow, RSIS Centre for Non-Traditional Security Studies, Singapore; Senior Research Fellow, Department of Politics and International Relations, University of Oxford

10.00 – 11.30	<u>Session 1: Country Perspectives on Geo-engineering Governance</u> (speakers tbc)
11.30 – 12.00	Coffee Break
12.00 – 13.00	<u>Session 2: Civil Society Perspectives on Geoengineering Governance</u> (speakers tbc)
13.00 – 14.00	Lunch. Venue: Executive Café, Blk N2.1 #02-03, 76 Nanyang Drive
14.00 – 15.00	<u>Session 3: Workshop on the Solar Radiation Management Governance Initiative (SRMGI)</u> Moderator: Mr Alex Hanafi Attorney, Environmental Defense Fund, United States
15.00 – 16.00	Plenary discussion
16.00 – 16.30	Coffee Break
16.30 – 17.30	<u>Session 4: Video conference with Panel at the Royal Society, London</u> Professor John Shepherd Professorial Fellow in Earth System Science, University of Southampton; Chair, Royal Society Working Group on Geoengineering Professor Georgina Mace Imperial College, London; Member of the Royal Society Working Group – Expert on Biodiversity Dr Chris Vivian Chairman of the Scientific Groups of the London Convention and Protocol Mr Andy Parker Senior Policy Officer, Royal Society Mr Mike Childs Head of Climate Policy, Friends of the Earth, England, Wales and Northern Ireland
17.30 – 18.30	Discussion and next steps
18.30	Close