Joint IPCC Expert Meeting of WGI, WGII, and WGIII on Geoengineering

20-22 June 2011 - Lima, Peru



Credit: Nasa

Geoengineering, or the deliberate large-scale manipulation of the planetary environment, is increasingly being discussed as a potential strategy to counteract anthropogenic climate change. Prevailing uncertainty in the sensitivity of the climate system to anthropogenic forcing, inertia in both the coupled climate-carbon cycle and social systems, and the potential for irreversibilities and abrupt, nonlinear changes in the Earth system with possible significant impacts on human and natural systems suggest that research is needed into geoengineering options as a possible complement to climate change mitigation efforts. Current discussions that suggest geoengineering as an option to support climate mitigation efforts remain rather abstract and lack comprehensive risk assessments that take into account possible adverse impacts over short and longer time frames. Major uncertainties exist regarding the effects of these techniques on the physical climate system and on biogeochemical cycles, their possible impacts on human and natural systems, and their effectiveness and costs. Unilateral action may have environmental side effects on other countries and regions, and may not appropriately address the global scale of the issue.

The understanding of the physical science basis of geoengineering is still limited and IPCC will, for the first time, assess this in several chapters of the WGI contribution to AR5. Improved scientific understanding of the impacts of geoengineering proposals on human and natural systems will be assessed by WGII. WGIII needs to take into account the possible impacts and side effects and their implications for mitigation cost in order to define the role of geoengineering within the portfolio of response options to anthropogenic climate change. Furthermore, this includes an evaluation by WGIII of options for appropriate governance mechanisms.

An IPCC Expert Meeting will provide a platform for exchange and discussion among experts from the different disciplines in order to better address this important cross-cutting issue, and encourage the consistent treatment of geoengineering options across the Working Group AR5 assessments.

Workshop Proposal

Meeting Agenda

Internal Meeting Website

[Login information has been sent to all participants with the invitation to the meeting.]