

Climate-related Geoengineering: Engineered to fail?

SBSTTA 16, Montreal, Canada, 30th April – 5th May 2012

Related Documents: UNEP/CBD/SBSTTA/16/10, UNEP/CBD/SBSTTA/16/INF/28 and
UNEP/CBD/SBSTTA/16/INF/29

Summary of issue

Geoengineering refers to a range of proposed technologies designed to deliberately intervene in and alter earth systems on a large-scale – particularly proposals to technologically manage the climate system as a ‘technofix’ to climate change. In Oct 2010 the CBD adopted a *de facto* moratorium on testing and deployment of geoengineering technologies and initiated reports into the governance of geoengineering and potential impacts on biodiversity (decision x/33 paragraphs 8w and 9 l and m).

At SBSTTA 16, Parties will review those studies and make further recommendations for governance of geoengineering. Given the clear conclusions of those studies – that most geoengineering is not governed by other international instruments and also that numerous risks to biodiversity and livelihoods have been identified – this is the moment to reaffirm and strengthen that moratorium and to initiate a geoengineering test ban.

What is at stake?

Political and commercial interest in geoengineering options as a ‘quick fix’ to climate change is growing, potentially derailing existing commitments to sensible CO₂ emissions reductions policies. Unproven and highly risky, geoengineering techniques have the capacity to negatively affect biodiversity on a huge and possibly irreversible scale while intervening in ecosystems and earth systems in a historically unprecedented manner. Far from “fixing the climate,” geoengineering may throw our planetary ecosystems even further out of balance, accelerating biodiversity loss and dispossessing some of the world’s most vulnerable people.

Dangers from Geoengineering:

The failure to adopt effective policies to reduce emissions has resulted in increased support in some OECD countries for geoengineering approaches that will have devastating consequences on biodiversity:

- Ocean fertilisation (stimulating the growth of algae to absorb excess atmospheric CO₂) threatens to disrupt marine ecosystems potentially impacting the livelihoods of fisherfolk and coastal peoples.

- Changing the reflectivity of the planet – e.g., by whitening clouds or shooting sulphates into the stratosphere (to reflect sunlight back to outer space) – will alter global rainfall patterns, prompting droughts and introduce a ‘novel balance’ between sunlight and atmospheric CO₂ with unknown ecological impacts.
- Biochar (burnt/charred biomass to, theoretically, sequester carbon in soil and improve soil fertility) is touted as a panacea for climate, food security and energy but may not work and will in fact result in further pressures on the land, displacing food supplies of people who are already hungry and landless.
- Dumping of biomass into oceans and estuaries as a carbon storage technique is likely to have significant adverse ecological impacts on seabed and marine ecosystems as well as facilitating loss of nutrients from soil and adding to land use pressures.

In almost all cases geoengineering’s alleged “carbon sequestration” or “cooling effect” is scientifically disputed and high risk, but the unprecedented threats to biodiversity and related livelihoods are real and tangible. Geoengineering puts at risk both biodiversity and the ability of local communities and indigenous peoples to equitably enjoy its benefits. As the leading international forum addressing this new field the CBD should strengthen the role it has already played on this issue.

Moratorium threatened.

Geoengineering tests on the increase.

Since the Parties to the CBD adopted a *de facto* moratorium on all geoengineering activities outside of controlled lab settings in 2010, there have unfortunately been concerted attempts to skirt or ignore the moratorium. The UK-based SPICE experiment (Stratospheric Particle Injection for Climate Engineering), which aims to test hardware for injecting sulphate particles into the atmosphere, may conduct an open air test later this year. A consortium of researchers associated with Silver Lining, Inc. is still developing the hardware for an open air test to artificially whiten clouds and others are already carrying out dumps of biomass in estuaries as geoengineering tests. Furthermore at least four private companies are now preparing to commercially deploy large-scale CO₂ capture machines, hoping to use the acquired CO₂ to increase oil recovery.

Proposals for SBSTTA 16 and beyond

Time for a test-ban treaty

Many of the geoengineers pursuing real world geoengineering experiments argue that no clear international governance exists and are using the absence of such clarity to move forward with their plans. Some are openly contemptuous of the CBD decision and falsely claim it has been superseded by smaller less representative bodies. Such confusion over governance is not helpful. At this point the CBD should be re-affirming and strengthening its 2010 decision and moving to close loopholes. The simplest way to do so would be to initiate the process towards a clear prohibition on open air testing of geoengineering technologies that could impact biodiversity or the rights of local and indigenous communities.

Parties at SBSTTA 16 must:

- Affirm that there is currently no transparent, global and effective regulatory structure for oversight of geoengineering activities. Assert that since no other body currently adequately oversees governance of geoengineering, the CBD is the correct body to do so.
- Re-affirm decision x/33 paragraphs 8w and x and further urge that parties neither fund nor permit geoengineering activities in an uncontrolled setting – initiating a test ban.
- Establish a transparent register of geoengineering-related research, including past open-air experiments and a mechanism for Parties and other affected stakeholders to raise concerns, especially where transboundary impacts are foreseen, biodiversity is threatened or human rights may be adversely affected.

Further information

ETC Group: www.etcgroup.org

Hands Off Mother Earth Campaign:
www.handsoffmotherearth.org

Econexus: www.econexus.info

The Convention on Biological Diversity Alliance (CBD Alliance) is a network of activists and representatives from NGOS, CBOs, social movements and Indigenous People's organisations advocating for improved and informed participation in the CBD processes.

For further information contact **Tasneem Balasinorwala**
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The logo for the CBD Alliance, featuring the letters 'CBD' in a large, bold, green font above the word 'ALLIANCE' in a smaller, bold, red font. The text is set against a white background within a light green rectangular box.