Climate Change, Geoengineering and Biodiversity

The role of biodiversity in climate change policy is receiving increased attention: both how the loss of biodiversity worsens climate change and how the protection of biodiversity needs to be central to any effective adaptation or mitigation strategy. Parties must ensure that the CBD principles (e.g. precautionary principle, ecosystem approach, Indigenous Peoples' rights) are upheld and applied in all strategies for combating climate change. The conservation of biodiversity will not be accomplished through the market mechanisms and techno-fixes that are dominant amongst contemporary public policy options—indeed there is a danger that over reliance on market approaches and unproven technologies might worsen the protection of biodiversity.

What is at stake?

Will the global response to climate change protect biodiversity and strengthen community and ecosystem resilience, or will it actually make the situation worse by promoting false solutions?

Geoengineering ourselves out of a planet?

The failure to adopt effective policies to reduce emissions has resulted in increased support in some wealthy countries for extremist geoengineering approaches (large-scale technological attempts to intentionally manipulate the climate) that will have devastating consequences on biodiversity:

• Ocean fertilisation (stimulating the growth of algae to absorb excess atmospheric CO2) threatens marine ecosystems as well as the livelihoods of fisherfolk and coastal peoples.

• Shooting sulphates into the stratosphere (to mask global warming by reflecting sunlight back to outer space) will wreak havoc the ozone layer and global precipitation patterns.

• Biochar (burnt/charred biomass supposedly to sequester carbon in soil and improve soil fertility) is touted as a solution for climate, food security and energy but will in fact result in further pressures on the land and food supplies of people who are already hungry and landless.

In all cases the alleged "carbon sequestration" or "cooling effect" is scientifically disputed and very high risk, but the threat to biodiversity and related livelihoods are real and tangible. Geoengineering represents an unprecedented threat to biodiversity and the ability of local communities and indigenous peoples to equitably enjoy its benefits; the CBD should strengthen the role it has already played on this issue.

Anything goes for climate mitigation, except cutting emissions

In pursuit of rapid fuel shifting (away from fossil fuels), new technologies and questionable energy sources are proliferating.

For example,

• Huge corporate-owned monocultures of agrofuels (e.g. sugar cane, soya, jatropha, oil palm) are destroying rich bio-diverse ecosystems and depriving local and indigenous peoples of their livelihoods, while increasing the use of petrochemicals and fertilizers, two of the main contributors to global warming (see Briefing 6 on bioenergy).

• GM biotechnology industry sees climate change as a big opportunity to 'contribute' to climate change adaptation and mitigation, using technologies that have risks to biological diversity and communities (i.e. GE trees, synthetic biology).

• The establishment of large-scale dams that devastate water and land biodiversity over entire areas –expelling local peoples from their homelands. Meanwhile, dams and reservoirs, particularly in the lowland tropics are also significant sources of methane, a powerful greenhouse gas.

The UNFCCC is the wrong path to follow

So far, the dominant approach for climate change mitigation has been the market imperatives of the UNFCCC – which thus far have proved to be a failure in terms of reducing CO2 emissions and achieving the holy grail of sustainable development. The UNFCCC has not only failed to reduce greenhouse gas emissions (current concentration levels is about 390ppm compared to 350ppm at 1990) but has actually endorsed some policies that disrupt ecosystem functions without delivering tangible climate benefits. This is especially the case for the Clean Development Mechanism, which has largely failed to achieve significant emissions reductions and has not contributed to sustainable development.

Now REDD and REDD+ - with their overwhelming focus/emphasis on market-based approaches (i.e. REDDbased carbon trading) - may result in the largest corporate land grab ever witnessed and yet another novel way of privatizing "air".

The experience of the CDM, and the less than ideal outcomes of other payments for ecosystem services, should give us plenty of reason to pause and consider alternative policy paths (see Briefing 5 for more detail on REDD and the Briefing 2 on financial resources).

Proposals for COP 10 and beyond

While the market-oriented approach of the UNFCCC is seeping into the CBD, Parties must take a different path, as there is little evidence that the market based approach will work (see Briefing 2 on financial resources). The protection of biodiversity and those who protect and nurture it are key elements in the fight against climate change.

Parties must:

• Adopt a moratorium on geoengineering and synthetic biology as proposed in SBSTTA 14.

• Ensure that any measure adopted by UNFCCC (or other international organizations) respects biodiversity conservation as well as the associated livelihoods that maintain it, and that all the necessary measures that need to be taken to avoid biodiversity and cultural diversity loss are adopted as a matter of urgency. This includes reaffirming the importance of the UN Declaration of the Rights of Indigenous Peoples (UNDRIPs).

• Reject approaches that reduce forests to carbon stocks (and trades), including biodiversity offsets

and market-based REDD approaches that lack appropriate safeguards for biodiversity and human/Indigenous rights, and have yet to demonstrably reduce carbon emissions (e.g. CDM).

• Reject land-grabbing and monoculture plantations for biofuels and biochar (see Briefing 6 on bioenergy).

• Promote and support the role that community conserved and Indigenous lands play in climate mitigation.

• Uphold previous moratoria, as the threats recognized have not diminished. In particular the moratorium on GURTs (Terminator technology) and GE trees.