



News & Updates:
Challenging the False Solutions



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Biofuels, GM, Biochar, Synthetic Biology & Geo-engineering at UN Biodiversity meeting

One week ago, the science body of the UN Convention on Biological Diversity (CBD) completed their negotiations in Nairobi. Anne Maina and I were there, working with other international allies, to help African negotiators on key issues around biodiversity and agriculture, and in particular on issues of biofuels, GM crops, biochar, agricultural biodiversity, synthetic biology and geo-engineering.

"Scientific" recommendations on Biodiversity

The Subsidiary Body on Science, Technology and Technological Advice (SBSTTA), is supposed to be a discussion between global scientists. The SBSTTA is supposed to make recommendations based purely on science, to the CBD Conference of the Parties (COP) meeting which will be held in Nagoya, Japan later this year.

But increasingly, the "scientists" which come to the SBSTTA are actually experienced negotiators with clear political mandates from their countries. This means that sometimes these negotiations can be very political, based on countries' interests, and nothing to do with the science at all... We therefore had to work hard to try to help the African negotiators to challenge some of these vested interests, and to ensure that the SBSTTA recommendations come out in the interests of biodiversity, and not business!

GM & Biochar

In the discussions on "Biodiversity and Climate Change", the CBD has been working to increase collaboration where possible, with the UN Climate Change negotiations. (This has apparently been a thankless task, because the climate negotiations apparently fail to see the relevance of biodiversity to climate issues!) In the negotiations, there was language that might have led to carbon offsets or programmes that would support the use of GM crops or biochar.

As strange as it might sound, the GM industry now claims that their "Roundup Ready" herbicide-tolerant GM crops are a solution to climate change! They say that because the powerful herbicide Roundup can be sprayed all over a field, killing the weeds without affecting the GM crop, there is no need to till the soil, and this reduces the emissions from agriculture. The GM industry call this "Conservation Tillage" agriculture, although this version is very different from other methods of conservation tillage that many sustainable agriculture processes already use!



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Biochar is the concept that biomass, usually trees, can be burned to form charcoal (or "biochar"), and buried in the soil to sequester carbon. Proponents claim that if done on a large scale, it can solve climate change by removing carbon dioxide from the atmosphere through trees, and once turned into charcoal, the carbon will remain stable in the soil for thousands of years.

However, there are many problems with this claim. Firstly, there are no scientific studies that can show the carbon will stay in the soil longer than 3 years. In fact, some studies show that biochar can lead soil to release more carbon dioxide into the atmosphere. Secondly, some proponents claim that up to One Billion hectares of land will be needed for new tree plantations to burn into biochar, and nine-tenths of this land must come from Africa! The push for large-scale biochar threatens to worsen the land grabbing in Africa that is already taking place for biofuels and agricultural investment, and is a serious threat to biodiversity, agriculture and land rights.

We therefore thought it important to remove all text that would have encouraged these approaches, and successfully worked with delegates from several African countries to remove the threat.

Geo-engineering

The issue of Geo-engineering was also discussed in the context of climate change. Geo-engineering refers to attempts to control changes in climate through large-scale experiments that can have far-reaching global impacts.

Geo-engineering techniques can include techniques such as "Ocean fertilisation", which means the dumping of thousands of tonnes of chemicals such as urea or iron into the sea. Proponents claim that this will increase algal growth, which will sequester carbon and sink to the bottom, thus reducing climate change. The claims that this process will successfully sequester carbon at the bottom of the ocean are completely unproven, yet dumping large amounts of chemicals clearly poses great risks to marine life and corals, and can be toxic and completely counter-productive.

Other geo-engineering techniques being proposed include the spraying of sulphur particles into the atmosphere, which can reflect the sunlight and supposedly "cool" the planet. But in addition to causing acid rain (a major threat to biodiversity), this can impact on interconnected global weather systems and affect rainfall and temperatures all over the world. Weather systems such as the monsoon rains between India and the East African coast could be vulnerable to weather-tinkering experiments such as these, with devastating impacts on the food security and livelihoods of millions.



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We therefore collaborated on this issue with ETC Group, whom some of you know, and a number of countries called for the SBSTTA to recommend a global moratorium on geo-engineering experiments, until oversight mechanisms and international agreements are in place. Only Canada objected to the proposal, but it will still go forward for discussion at COP.

<http://www.canada.com/technology/Environmentalists+criticize+Canada+defiance+over+geoengineering/3039419/story.html>
<http://www.etcgroup.org/en/node/5137>

Synthetic Biology

Many of you will have seen last week's news that the billionaire scientist, Dr Craig Venter has created the first man-made, self-replicating living organism with a genome made of DNA constructed purely with chemicals assembled by a computer. This takes the concept of "genetic modification" to a whole new level, and presents us with a host of new practical and philosophical questions about potential applications, dangers, and the meaning of life itself.

Venter claims that this technology could one day be developed for a range of uses, in particular biofuels. The idea that the current threats that biofuels bring to biodiversity, land grabbing and food security, could be overcome by so-called "second generation" or "third generation" biofuels can be very appealing to some. Part of the current enthusiasm for biofuels is driven by a trust that these as-yet undeveloped technologies will someday solve all our problems.

But there are clearly great risks associated with the development, use and release of living organisms, whose behaviour may be entirely unpredictable.

Venter and his colleagues may believe that life is as simple as a computer programme, that genes code for entirely predictable behaviour. But the reality is that genes interact with each other in an incredibly complex way, that geneticists are unlikely to ever fully understand, which is why there is so much uncertainty about the potential effects of Genetically Modified crops which have genes from different species.

The announcement by Venter last week served to alert countries to the risks of Synthetic Biology, and the need for international policies to keep up with developments. They proposed that the COP apply the precautionary approach to synthetic biology until global regulations are in place, (which would amount to a de facto moratorium), and the formation of a special expert group to examine the issues.



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Biofuels

The biofuels negotiations were always going to be the most controversial issue at the SBSTTA, with some negotiators clearly sticking to their countries' political and economic agendas, rather than purely the issues of biodiversity and socio-economic impacts. However, the African negotiators, as representatives from their environment ministries, had all seen the impacts of biofuel developments on their forests, ecosystems, land rights and food security in their own countries, and were determined to strengthen international regulations on the issue.

A key point was where Canada tried to remove all references to Land security from the CBD's assessment of impacts of biofuels. But the African delegates knew that this was a key issue, and South Africa, Kenya, Uganda, Ethiopia, Malawi, Liberia and Botswana all came together to successfully insist that the need for land is the major concern about the production of biofuels, and it must therefore be included in all considerations.

Together, African delegates and NGOs worked to fend off the "Canadian Land Grab"!

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For me, this process highlighted our important work raising awareness amongst governments, and in particular how Environment ministries can be particularly sympathetic to our concerns (sometimes in contrast to the conflicting interests of Energy or Agriculture ministries.)

In all of these critical negotiations, African delegates worked closely with NGOs, took strong positions and worked hard to strengthen the work of the CBD to defend the rights of biodiversity, indigenous peoples and agriculture. It was wonderful to see Africa leading the world.

ABN's contribution was greatly valued by many of the delegates, and we can celebrate that our network's influence is being felt at all levels!

Best wishes,

Teresa