

Food providers hold the key – CBD has the mechanism

patrick mulvany - PracticalAction

After 12 years of debate, it is high time to put biodiversity-based agriculture at the heart of the CBD; adaptation through local management of agricultural biodiversity by food providers is essential for food sovereignty and planetary health in a warming world

The challenge for the CBD is that without radical transformation of the dominant model of industrial agriculture, livestock production and fisheries, not only will food providers and agricultural biodiversity continue to disappear but hunger will increase alongside global warming. To forestall this, among other things, the CBD needs to decisively involve the social organisations of food providers in its work.

The food insecurity created by vulnerable, uniform and genetically weak monocultures will haunt future generations. What is needed in an unpredictable world is more not less diversity, collective not monopoly control of resources, localised not global food systems – systems that conserve rather than consume carbon.

The CBD will fail in its mission if it does not confront the tsunami of corporate control of the food system from seed to sewer. In place of this it must assert the primacy of agricultural biodiversity controlled by local people over economics controlled by unaccountable TNCs.

The CBD needs to stem the tide of corporate control of food and nature when revising its Programme of Work on Agricultural Biodiversity – opening space in international and national policy as well as for local actions that will sustain agricultural biodiversity.

The key to these local actions is held by small-scale family and peasant farmers, pastoralists, artisanal fisherfolk, Indigenous Peoples, forest dwellers and other food providers who know how to develop and manage a broad diversity of species, varieties and breeds – our agricultural biodiversity that underpins food sovereignty and resilient production systems in the face of multiple threats.

Agricultural biodiversity is more than colourful seeds, vegetables and fruits displayed in biodiversity boutiques. It is the product of the ingenuity of women

and men whose knowledge and skills over millennia have crafted myriad varieties and breeds adapted to a multitude of ecosystems and suited to every social, cultural and economic need. It is the diversity of all species above and below the ground and in aquatic systems that have co-evolved with people to provide food, fodder, natural fibre and thriving ecosystem functions that sustain life on Earth.

However, there is a haemorrhage of these vital resources accelerated by the spread of the dominant model of industrial agriculture for commodities and agrofuels, intensive livestock production and extractive fisheries, contaminating those resources that remain with proprietary GMOs. These losses are exacerbated by inequitable trade and commercial agreements, seed laws and intellectual property rights systems that undermine farmers', livestock keepers' and indigenous peoples' rights.

A countervailing policy framework exists that will defend agricultural biodiversity: food sovereignty. This is the policy proposal of small-scale farmers who know how to provide good, wholesome food. It puts them and other food providers centre-stage in the food system and prioritises the needs of consumers for nutritious foods, sourced as locally as possible.

The core principles of food sovereignty cover all dimensions of a food system that will provide food in the long-term rather than short-term profits. It focuses on food for people rather than internationally tradeable commodities. It values food providers rather than eliminating them.

Continued on p. 2

To Parties: *action* on new and emerging threats to biodiversity must be timely, not several years later...

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Implementing the Forest Programme of Work?

sandy gauntlet – global forest coalition

Adopted in 2002, the Convention on Biological Diversity's programme of work (PoW) aims to preserve and protect forest biodiversity. Global Forest Coalition (GFC) supports the PoW, and believes that independent *monitoring* of implementation is critical to its success.

To this end, GFC is analyzing implementation of the PoW in a collection of diverse countries, each of whom have pledged to carry out the work of the Convention on Biological Diversity. In our view, this work will assist not only Governments in honouring their commitments, but also help civil society organizations understand the complexities of the programme, so that they can work with governments to ensure success.

While the full analysis will be launched at the COP in Bonn, a preliminary analysis will be available for final comments by governments and civil society alike **today** at the side event sponsored by GFC. Below are some key findings and recommendations.

(1) Levels of implementation are variable, but all countries could do better and some countries are exceptionally low. Capacity building of all parties, including Indigenous Peoples (IPs) and stakeholders needs to be improved in most countries and the programme of work needs to be central to the heart of forest policy in many countries to enhance the implementation of legally binding commitments under the CBD.

(2) There are some clear success stories of forest biodiversity management, especially in programmes on recognized Indigenous lands and territories, yet the global involvement of IPs in policy development remains weak. Our recommendation is the immediate commitment to the rights of IPs to manage their own territories as enshrined in the UN Declaration on the Rights of Indigenous Peoples, along with the effective and full involvement of IPs in policy development.

(3) Some countries are heavily reliant on a system of Protected Areas as a biodiversity management mechanism to the exclusion of other protection mechanisms. Our recommendation is that there needs to be greater recognition that biodiversity conservation goes beyond the establishment of protected areas and that where there is a protected area system there is a corresponding need to ensure that the rights of Indigenous Peoples and Local Communities in respect of these areas are fully respected and prioritized.

(4) In many countries there is a heavy reliance on environmentally harmful monocultural tree plantations within the framework of forest and climate change mitigation policies, while little effort is being made in terms of forest restoration. Our recommendation is for a clear and coherent definition of forests, one that recognizes the unique nature of natural ecosystems and excludes monocultural tree plantations.

(5) Our study yielded findings related to weak institutional capacity, corruption, enforcement, lack of

expertise, etc. Our major recommendation here prioritizes on the need for certainty and legitimacy in land tenure systems (which is often lacking), and the full and effective participation of IPs and local communities.

(6) Our analysis found economic conflicts, including those related to agricultural development and agrofuels. We recommend the identification and eradication of perverse incentives in relation to forest biodiversity, with a particular concern to the current boom in agrofuel production demand.

(7) Lastly, there appears to be considerable resistance to the adoption of the ecosystem approach in many countries and the recommendation is that research and capacity around forest definitions and inclusions should be improved with an eye to better understanding and adoption of the ecosystem approach.

****SIDE EVENT****

**Forest PoW Implementation
Report from the Global Forest Coalition
Monday, 1.15 Philippines Room**

Agricultural biodiversity (continued from p. 1)

It localises food systems rather than dependence on inequitable global trade. It puts control locally instead of by unaccountable corporations. It builds knowledge and skills that conserve and develop local food production and rejects technologies such as GMOs. It works with nature in diverse agroecological systems rather than energy-intensive production methods that damage the environment and contribute to global warming.

The Parties to the CBD must put biodiversity-based agriculture at its core. The Parties should call for regulation of industrial food systems that destroy this biodiversity. They should also increase priority for the conservation and development of agricultural biodiversity, and the enhancement of ecosystem functions, in agroecological systems managed by food providers where they live – on-farm by small-scale farmers, on the range by pastoralists, in inland and coastal waters by artisanal fisherfolk...

...and policies and practices are needed that will facilitate an increase in exchanges of GM-free seeds, livestock breeds and other genetic resources for food and agriculture, between communities, countries and continents.

In the face of climate change, increasing adaptive capacity is non-negotiable. It is essential for mitigation but can only be achieved through increased agricultural biodiversity, and its' associated ecosystem functions, managed by local family and peasant farmers, pastoralists and artisanal fisherfolk and other local food providers.

Parties to the CBD must seize this historic moment and:

- **Put culture back into agriculture**
- **Put biology back into biodiversity**
- **Put food sovereignty, food providers and their organisations at the centre of agricultural biodiversity**

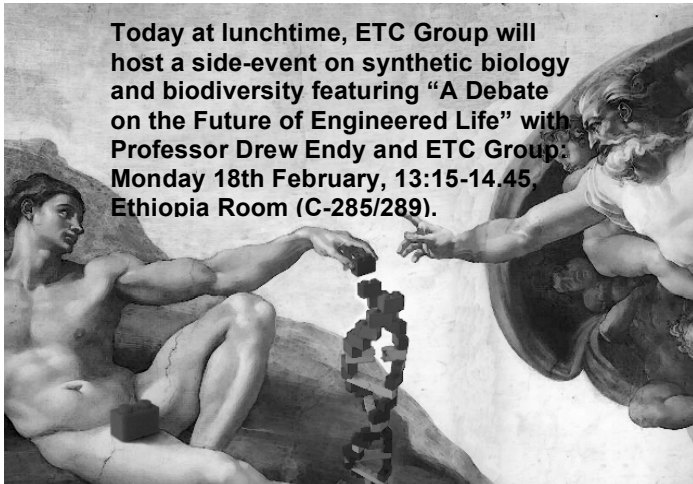
Side Event: Ag biodiv for food sovereignty. Tuesday. Lunch. Canada Room.

Synthetic Biology: Extreme Genetic Engineering + Biodiversity

etc. group

Drew Endy has a dream: he wants to engineer trees that grow into houses and make giant programmable gourds he can live in. He may sound like a character in a children's book but actually Endy is a bioengineering professor and one of the leading proponents of an emerging industry with multibillion-dollar intentions - Synthetic Biology.

While the rest of the world are still grappling with the safety, ownership and justice implications of genetically modified organisms, synthetic biologists such as Drew Endy are moving to the next stage of engineering life – using gene synthesis machines to artificially build DNA. Endy and his colleagues have designed thousands of short strands of DNA they call “biobricks” that work like the standard commands of a computer language. Snap them together, claims Endy, and you can program novel life forms.



Today at lunchtime, ETC Group will host a side-event on synthetic biology and biodiversity featuring “A Debate on the Future of Engineered Life” with Professor Drew Endy and ETC Group. Monday 18th February, 13:15-14.45. Ethiopia Room (C-285/289).

Other synthetic biologists are taking a different tack. Professor Jay Keasling of University of California-Berkeley (USA) has used synthetic DNA to rebuild complicated ‘genetic pathways’ so that yeast spit out natural rubber or even gasoline. “Really we are designing the cell to be a chemical factory,” explains Keasling. “We’re building the modern chemical factories of the future.”

Such claims may raise eyebrows. They have certainly raised excitement (and money) in industrial circles. BP, DuPont, Shell, Chevron, Pfizer, Virgin fuels and Cargill are just some of the big names partnering with new synthetic biology companies to commercially produce chemicals, drugs and biofuels.

Synthetic Genomics, Inc., founded by gene mogul J. Craig Venter, has applied for broad patent rights on synthetic life and claims to be about to unveil the first human-made species - a synthetic bacterium, dubbed Synthia. Its entire DNA code is built from scratch. Venter claims he will produce synthetic microbes that make hydrogen and liquid biofuels or that can be released into the ocean to soak up CO₂.

All of which raises significant questions for the Convention on Biological Diversity, tasked to oversee the fair and equitable use of genetic resources and to protect biological diversity. Neither the CBD nor the Cartagena Protocol on Biosafety have ever considered the biosafety risks raised by synthetic organisms even though they are self-evidently Living Modified Organisms (LMOs) possessing “a novel combination of genetic material obtained through the use of modern biotechnology.” As well as microbes, synthetic biologists are also working on developing novel crops. For example Drew Endy’s company, Codon Devices, has partnered with Agrivida Inc. to develop corn varieties with built-in enzymes that degrade the plant into ethanol.

Synthetic organisms do not need to be novel to raise concerns. In 2003 a US geneticist, successfully reconstructed a working poliovirus with synthetic DNA using only genomic data found on the internet. In 2005 US Army researchers constructed a working version of the previously extinct 1918 flu virus demonstrating that deadly pathogens, affecting not only humans but also wildlife, can now be built synthetically.

Many applications of synthetic biology involve transforming agricultural sugars into chemicals and biofuels. Consultants to the US Department of Energy have predicted that synthetic biology could enable 15-20 percent of chemicals to be produced from biological sources by 2015 and may rapidly accelerate the liquid biofuels market - providing new enzymes and designer microbes to turn biomass into high grade fuels such as butanol and Jet A (jet fuel). While synthetic biologists tout the climate benefits of shifting from petroleum, the downstream impact on agricultural systems and forestry is likely to be immense. We can expect new land clearances, depletion of soils and the release of climate changing gases.

Synthetic biology has implications for bioprospecting as well. It is already possible to sequence an entire microbial genome in one location, upload it to the Internet and then download it to another location to be reconstructed by DNA synthesisers. Such “digital biopiracy” evades existing CBD provisions on Access and Benefit Sharing. DNA sequencing and synthesis technology may make it as easy to transmit (or steal) genetic resources through the Internet as downloading music files.

NOTICE *civil society meetings****
every morning
9-10 AM. Red Room.**

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