

Report Release: Outsmarting Nature?

New Report Questions Risky Synthetic Biology Developments Promoted Under “Climate-Smart” Guise

Paris, 27th November 2015 – Some of the world’s largest agro-industrial corporations will be flying the flag for ‘climate-smart agriculture’ at the upcoming Climate Summit. They will claim that hi-tech crops and intensive industrial agriculture are needed to rescue farmers (and the hungry) from a warming world – a claim widely dismissed by peasant movements and civil society groups. A new report today from ETC Group and Heinrich Böll Foundation uncovers plans to use a clutch of extreme biotechnology approaches known as Synthetic Biology to move forward this industrial ‘climate-smart’ agenda. Extreme interventions range from trying to alter the way in which plants carry out photosynthesis to releasing ‘gene drives’ into the wild to alter natural populations of weeds.

Synthetic Biology (or Syn Bio) describes a set of new and emerging genetic engineering techniques and a much-hyped young industry that is designing and engineering life-forms from scratch for industrial purposes. Until now most of the commercial products of Synthetic Biology have been fuels, flavors and chemicals produced by engineered microbes, but the field is rapidly expanding to encompass bioengineered crops and other agricultural applications that will involve environmental release. This report details some of the ways in which synthetic biologists are venturing into riskier and more extreme areas of development that will continue to tie farmers to pesticide-intensive production, all the while using the rhetoric of ‘Climate-Smart Agriculture’ as a justification.

“Farmers’ movements and their allies have already made it absolutely clear that so-called climate-smart agriculture is the wrong fix for climate change. Applying synthetic biology to the challenges that agriculture faces is doubly wrongheaded,” explains Silvia Ribeiro, ETC Group’s Latin America Director, currently en route to the Paris climate negotiations. “To cool the climate what needs to be recognized and supported is agroecological and resilient small scale and peasant farming systems, not falling for false fixes from the Big Agribusiness corporations that brought us climate change in the first place.”

“In Paris civil society will be saying we need system change to fight climate change. What we certainly don’t need are risky techno-fixes,” said Lili Fuhr of Heinrich Böll Foundation. “Agribusiness corporations would have us believe it is better to change fundamental natural processes such as photosynthesis than to move away from industrial agriculture and its damaging impacts – that is not just insane, but fundamentally unsustainable and unjust.”

The 20-page report – available online [here](#) – includes:

- An overview of the Players lining up behind the “Climate-Smart” brand and the Global Alliance for Climate Smart Agriculture (GACSA).
- Details and critique of public and private research projects to alter photosynthesis pathways in plants and microbes, theoretically to increase the carbon sequestration of plants.
- Details and critique of Synthetic Biology projects that aim to increase nitrogen fixation in plants and create ‘self-fertilizing plants,’ theoretically to reduce fertilizer applications.
- An exposé of new Syn Bio applications developed by agrochemical giant Syngenta that make the activation of ‘climate-tolerance’ traits dependent on the application of proprietary pesticides – thereby tying farmers closer to agrochemical use.
- Proposals to release controversial ‘Gene Drive’ technology into the wild to make weed populations more susceptible to Monsanto’s Roundup herbicide, altering ecosystems to extend the commercial viability of that agrochemical.

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Notes for Editors:

To download a pdf of “Outsmarting Nature?” go [here](#).

“Outsmarting Nature?” is the second of two reports prepared by ETC Group and Heinrich Böll Foundation exploring the intersection between Synthetic Biology and climate change issues. The first report, “Extreme Biotech meets Extreme Energy” explores the way in which Synthetic Biology companies are collaborating with oil, coal and gas interests to extend fossil extraction. It is available [here](#).

Additionally, ETC Group and Heinrich Böll Foundation released this week new language versions of a ten-minute animated introduction to Synthetic Biology. Titled “What is Synthetic Biology? Engineering life and livelihoods” this short explainer cartoon, drawn by award-winning Canadian animator Marie-Josée Saint-Pierre and produced by documentary filmmaker Jocelyne Clarke was previously only available in English but is now available in French, Spanish, Portuguese, German and Haitian Creole. The new language versions can be viewed at:

<http://www.etcgroup.org/content/video-animation-synthetic-biology-5-languages>

ETC Group will be co-organising the following events in Paris during COP21 of the UNFCCC:

“From ‘Net-Zero’ Emissions to Geoengineering: a deadly trap for the planet” - ETC Group and Biofuelwatch. Dec 6, morning (place and time tbc), People’s Climate Summit, Montreuil

"Net- Zero emissions: dangerous sleight of hands" - ETC Group, Biofuelwatch and the Global Forest Coalition - December 11, 14.00-16.00 at ZAC, CENTQUATRE
(Room adjacent to Restaurant)