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Who benefits from gene drives as a modern biotechnology?

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The world is suffering because biodiversity is poorly protected and poorly preserved. The question remains, how do we plan to conserve biodiversity for a better life on earth? is it by traditional knowledge or by modern technology? Indeed, today, modern biotechnology is put forward as the solution to improve the life of human beings on earth. This technology invades the field of agriculture, forestry and the fishery with the aim of improving productivity. It is at the root of the destruction of biodiversity and the imbalance in the harmony of nature. In addition, the introduction of biotechnologies like genetically modified organisms (GMOs), synthetic biology and gene drives (digital sequence information technologies) have an impact on the livelihoods of communities. The GMOs were originally promoted with the claim that they would benefit people and biodiversity as well; but this is not the case. The example of failed BT cotton in India and Burkina are examples why we do not need this risky and failed technologies.

In India, the *Andhra Pradesh Coalition*, in its report *Did BT cotton still fail in Andhra Pradesh in 2003-2004?*, investigated the cases of 164 small-scale farmers in three districts of Andhra Pradesh between 2003 and 2004. The report states that BT cotton increased yields insignificantly and that overall profits of farmers growing BT cotton were reduced by 9%. In Africa, a COPAGEN report titled *BT Cotton and us - The Truth of Our Fields!*, published in April 29, 2017, draws a damning conclusion. It describes the consequences, in Burkina Faso, of genetically modified cotton cultivation developed by Monsanto. The peasant field research over a period of three years involving 203 cotton producers clearly showed that in the 2014-2015 and 2015-2016 cotton seasons, yields were lower than those of conventional cotton. These examples show the danger of the use of these modern biotechnologies in agriculture.

There is clearly a conflict of interest between the conservation of biodiversity and the use of genetically modified organisms and other forms of modern biotechnology like gene drives. These gene drives could have a serious impact on human health, environment and biodiversity.

In the light of various findings regarding the use of modern biotechnology in agriculture, there is every reason to believe that the promoters of modern biotechnology are benefiting from it. We say NO to gene drives and all false solutions to the biodiversity crisis.

Post-2020 plenary: A wasted afternoon

Antje Lorch (Ecoropa)

In the corridors: The dismay was palpable on Tuesday afternoon. Many delegates were surprised that they were forced to listen to presentations while they had expected the plenary to be dedicated to the important discussion on the Post-2020 agenda of the Convention.

Most observers agreed that it was an unfortunate use of the already limited time available. “It’s not that the presentations were that bad,” said one delegate, “except maybe some of that regrettable business about the Paris Agreement.”

Another developing country negotiator thought that the Plenary session “would have been a nice side event, but we came prepared to actually discuss the post-2020 agenda,” she said, “instead of being asked

to sit for hours to hear about what appears to be the Executive Secretary and Europe's agenda for it."

A number of delegations had prepared statements on specific elements of the Post-2020 agenda, but by cutting the available time short by two hours, the possibility for a meaningful exchange was also very limited The EU proposed that Parties should focus on process rather than on the substance of the agenda, apparently following the perspective already presented by the Executive Secretary.

But things soon became more complicated. Africa let it be known that it links progress on the Post-2020 agenda with progress on Digital Sequence Information (DSI): without a plan in place to develop DSI benefit sharing, it would not be possible to advance. Since the plenary could not discuss this and other issues further, the discussion is now moved to a contact group. However, both DSI and post-2020 contact groups were scheduled in parallel on Wednesday evening. and many developing countries found themselves placed in a dilemma. Anybody who sees links between the issues will have difficulty in discussing them in two different groups simultaneously.

"What it looks like," said one long-time CSO representative, "is that this is trying to support, or at least is unduly acquiescent to, the European agenda for Post-2020. This is really too bad, because by stifling concerns and discussion by Parties, conditions could be created that will lead to regrettable pressure and late-surfacing disagreements."

Farmers' seeds underpin biodiverse food systems

Patrick Mulvany (ECOROPA)

The Alliance for Food Sovereignty in Africa /GRAIN's report **"The real seed producers: small-scale farmers save, use, share and enhance the seed diversity of the crops that feed Africa"** is a wake-up call to policy makers to ensure that the needs of the **real food and seed producers** of Africa are met. The report draws on six Country Reports (Ethiopia, Mali, Senegal, Uganda, Zambia, Zimbabwe) which summarised farmers' views about their seed systems and provided a national context.

The views of African small-scale food producers summarised in this report should spur actions to protect their resilient and biodiverse seed systems. These provide the seeds for the food of the majority in Africa today, and could do so tomorrow as these farmers' seed systems – enhanced through exchanges of peasant seeds – adapt to climate change and other threats. At a time of the historic adoption by the UN of the Declaration that at long last recognises the collective rights of peasants, the CBD should be embedding this in its post-2020 framework, with special emphasis on sustaining the agricultural biodiversity and biodiverse seed systems that small-scale farmers manage in the framework of food sovereignty.

These farmers already 'mainstream' agricultural biodiversity in their agroecological production systems using their biodiverse seeds and their tried and tested knowledge and practices. The CBD could help 'mainstream' this as well by insisting that in the post-2020 framework it implements its existing Decisions about policy and practice in relation to agricultural biodiversity and Farmers' Rights. This would help realise widespread support for Farmer-Managed Seed Systems and their biodiverse agroecological production. It would also ensure that the proprietary interests of legal persons and their allies do not undermine these resilient seed systems through unjust seed laws and the spread of industry's genetically uniform monocultures, which should be regulated, reformed and reduced.

The Key Messages, expanded in the report, are:

1. Farmers' seeds feed Africa;
2. Farmers' seeds are reliable, available and affordable;
3. Farmers' seed practices are diverse and knowledge-rich;
4. Women are Africa's seed guardians;
5. Farmer-managed seed systems underpin small-scale agroecological production and food sovereignty;
6. Farmers are being pushed to abandon their seed systems;
7. African governments are giving in to corporate pressure and undermining local seed systems.

The report and related documents are available at: https://www.grain.org/e/6035

Salmon farms are threatening Chilean Patagonia

Florencia Ortuzar (Interamerican Association for Environmental Defense, AIDA)

The Chilean salmon industry has devastated vast expanses of Chile's northern coast, and is now moving towards the *Magallanes* region of Southern Patagonia. Magallanes is a remote and pristine area, home to a wide array of marine protected species including whales, penguins, turtles and dolphins. Cold-water corals were recently discovered in the area, confirming the region's unique positioning as a biodiversity hot spot.

Despite its environmental value, Magallanes is one of the least studied marine regions in the world. Harsh climatic conditions and the difficulty of travelling there have left large portions of its ecosystems practically unknown. As a result, the salmon industry is growing faster than scientific knowledge and its consequent preventive regulation.

This is where authorities must look to the Precautionary Principle - a legal tool that seeks to protect the environment before damage occurs, even when there is no certainty that it will occur. But environmental degradation is already occurring in Magallanes, although it is largely invisible and awareness of the problem is relatively low.

To begin with, the water and the seabed are contaminated with large amounts of waste from the faeces of the fish and the chemicals used in their cultivation. Also, there is no real control of the quantity of fish maintained per sea space, which results in the tendency to exceed the carrying capacity of bodies of water to decompose, recycle, absorb or disperse the enormous amounts of organic and chemical waste that intensive salmon farming produces. All this generates an increase in the demand for oxygen, which leads to eutrophication and the consequent anaerobic condition of the marine environment, making it difficult or impossible to sustain marine life.

More than half of the farms that operate in Magallanes are causing a total or partial lack of oxygen in the waters, a fact corroborated by audits carried out by the Comptroller General of the Republic on authorities in charge of regulating and controlling aquaculture in the country. This demonstrates that salmon farming concessions are being granted without the scientific backing that guarantees they will not cause environmental damage.

The excessive discharge of nutrients into the marine environment is also related to the proliferation of toxic algae (the dreaded "red tides"), which have increased significantly in frequency and intensity as a result of salmon farming. And escaped farmed salmon can reduce the abundance of native marine fish species through competition and/or predation.

Another big problem with the industry is the excessive use of antibiotics, which is higher than in any other salmon-producing country. This provokes antimicrobial resistance, a problem that has been recognized by the World Health Organization as a serious threat to global public health.

Biodiversity impacts including harm to the integrity of whale's ecosystems and the exclusion of cetaceans are main concerns at the International Whaling Commission (IWC). There have also been reports of Chilean Dolphins entangled in nets designed to catch salmon that have escaped from aquaculture farms.

AIDA has sent an Urgent Alert[1] to the CBD and other international environmental conventions, requesting that authorities: support the State in the promotion of scientific research to help identify the real and potential impacts of the salmon industry in Patagonia; remind the Chilean State of its obligations under the agreements that are being violated by this situation; demand the application of the Precautionary Principle and the elaboration of a strategic environmental impact assessment of the industry in Magallanes; and request, where appropriate, the application of sanctions, suspensions and/or cancellations of salmon farm concessions in the Magallanes region.

1 Urgent Alert Salmon Farming: https://aida-americas.org/sites/default/files/resources_files/Urgent%20Alert%20Salmon%20Farming%2018-09-24.pdf

Deforestation, monocultures and Strategic Plans

The farce continues

Souparna Lahiri (All India Forum of Forest Movements & Global Forest Coalition)

COP14 will review the progress in the implementation of the strategic plan for biodiversity 2011-2020 evaluating how far the governments have been able to fulfil Aichi Targets. The Conference will also further look in to post 2020 global pathways towards 2050 vision for biodiversity. The experience in India shows how countries continue to allow deforestation while pretending to restore forests with monoculture tree plantations, and how problematic the concept of offsetting and climate or land degradation "neutrality" are in this respect.

India's Fifth National Report to CBD 2014 reported on India's progress towards Aichi biodiversity target 5. The report mentions *Green India Mission* (GIM), a climate action plan to increase "forest/tree cover on 5 m ha of forest/non-forest lands and improved quality of forest cover on another 5 m ha of non-forest/forest lands". If we look at this greening programme that is in progress across the states, it looks like a massive plantation drive of monocultures. Afforestation and reforestation is advocated in all the State Action Plans (SAPCCs) through implementing, promoting and dovetailing of Green India Mission (GIM) and National Afforestation Programme.

Most of the SAPCCs take GIM as a guidance to increase forest cover, both inside and outside forest areas including promotion of industrial and energy plantations, CDM possibilities and the REDD+ in the context of Sustainable Forest Management. The main thrust is 'on the improvement of forest trees and productivity of forests… species exotic to the country are being introduced and propagated in suitable environment and particularly where indigenous species fail to thrive'.

The focus, therefore, has largely been on afforestation and the State Forest Departments are familiar with only routine afforestation programmes, largely dominated by the monoculture species, including eucalyptus, *Acacia auriculiformis*, teak *(Tectona grandis)*, sal *(Shorea robusta)*, pines, poplar, *Acacia tortilis*, etc.

While GIM is on, a look at the loss of forests in India between 1980 and 2015 shows little or no progress towards achieving Aichi Target 5. The Forest Survey of India 2015 says that total forest area increased by 3,775 sq. km since 2013. In the same period, 2,511 sq. km of very dense and mid-dense forests were completely wiped out. The government's reply to a Parliament question indicates that between October 1980 and July 2016, India has diverted almost 900,000 hectares of forest land for non-forest purposes. This amounts to 1.2% of India's total forest area as of 2015. Interestingly, the *Ministry of Environment, Forests and Climate Change* (MoEFCC) pegs diverted forest land much higher. According to MoEFCC figures, forest land diverted during this period stands at 1.49 million hectares, which is 1.9% of total forest area in 2015.

It is clear that even though India's National Reporting talks of increased forest and tree cover, restoration and improved quality of forest cover, massive deforestation is continuing. If cutting down natural forests continues at this rate, replacing them with plantations does not serve the purpose of achieving Target 5. Allowing destructive industries to "mainstream" biodiversity through offsetting and promoting concepts like climate or land degradation "neutralilty" only provides an excuse to replace precious forests with monocultures, with devastating consequences for biodiversity and our chances to comply with Aichi Target 5 and SDG 15.2.

Remembering Environmental Defenders