

What's happening with seeds in the global South?

Key Learning 3: South-South interactions demand more attention

We agree that it is a useful and accurate to state that industrial and corporate seeds from the global North are primarily being pushed onto former colonies in the global South. It is also true that exploitative and unhealthy dependencies are intentionally engineered by a colonial capitalist logic which directly attacks the rights of small-scale farmers to benefit from and use their own ancestral and locally adapted varieties of seeds.

Simultaneously, however, we must be wary not to perpetuate a binary divide especially when a colonial capitalist mindset or culture can manifest within all of us, regardless of origin. In several parts of the global South it is present and being applied in relation with seeds and their custodians. Evidenced by the most recent reports from the African Centre for Biodiversity (ACB), we insist that more attention is given to interactions between countries in the global South. We organise these interactions into the bad, the good, and the actively hopeful.

A. The Bad:

Starting with the bad, we can follow global geopolitical and historical flows of GM seeds in the global South. South Africa was the tenth member, the first African government to join UPOV-91 and the only one involved in the law's creation. Consequently, plant breeder's rights (industrial property rights) were granted for biotech seed corporations to privatise seeds and maximise 'return on investments'. Since then, South Africa became the continent's depot for importing GM seeds and grains (from South America) then re-exporting them to other countries. Effectively, the country is used by the biotech industry as the primary experimental dumping ground and launchpad for both new and outdated GM varieties in Africa.

With recent droughts and pest infestations, caused by industrial agriculture and the climate crisis, East African governments are lifting their bans on importing toxic GM food and dangerous seeds as an emergency response to prevent famine. The same de-regulation is likely to be true in response to COVID-19. If governments and international agencies do not prioritise structural support for agroecology and food sovereignty, we can expect more importing of harmful, poor quality food and the "adoption of short-term technologies that provide neither resilience nor security in these desperate times, paving the way for further risks and uncertainties" (ACB 2020a: 3).

ACB's most recent [alert report](#) (March 2020) informs us that South Africa's government recently authorised new field trials for GM soybean and maize (no other African country has authorized GM maize cultivation) and the exportation of MON87640 X MON810 drought-resistant maize to Kenya and Uganda for field trials. Despite Kenya banning the import of GMOs in 2012 due to documented health concerns, the ban is effectively dissolved (GM bt cotton is approved for commercial release) after pressure from the WEMA partnership including Gates Foundation, USAID and UK's Department of International Development, which funded Kenya's biotechnology promotion agency, the African Agricultural Technology Foundation.

What's most alarming is that these corporate GM maize varieties were rejected by South Africa for commercial release because they repeatedly failed to improve yield under drought conditions in the field trials. Monsanto appealed the decision, but the Ministry of Agriculture upheld its decision in October 2019. Now they are being pushed to East African countries which have less legal rights and access to biosafety information. Why is ineffective, dangerous, and monopolising GM seed being exported from South Africa to the East African region? What will be the likely impacts on local food and seeds systems and the livelihoods of small-scale farmers?

Another troubling global flow of South-South interactions is the pushing of GM potato onto Rwanda developed by the International Potato Center (CIP) in Peru, supported by US AID. In Peru, just like the EU, GM potatoes are banned due to increasing evidence of harmful and unjust human and ecological impacts. Instead of cultivating good relationships with the Andean indigenous stewards of potato diversity, CIP supports the cultivation of a risky GM technology that enables further corporate appropriation without benefit sharing.

According to, ACB “one of most worrying recent developments in biotech is that through the combination of sequencing technology and gene synthesis, companies have found a new way to commit biopiracy” (ACB 2020b: 6). By law, seed companies must make access agreements (informed prior consent) and benefit sharing agreements when they use **physical** genetic plant resources. In response, biotech corporations create a legal loophole by translating genetic information from physical seeds into **Digital Sequence Information** (DSI) which is uploaded onto a colonial-style digital library; GenBank. DSI allows biotech to use evade use of physical genetic material by using digital genetic material which does not (yet) legally obliged access and benefit-sharing agreements. This must be addressed because “**digital biopiracy**” still equates to stealing (extracting and appropriating) physical materials and traditional knowledge from indigenous peoples and peasant communities with no compensation or justice.

Two of the three ‘resistance’ genes engineered into the GM potato that CIP wants to release in East Africa are not from physical resources, but synthesised gene sequences downloaded from GenBank. One synthesised gene originates from *Solaum venturii* collected in northern Argentina in 1973 and was sequenced by Sainsbury Laboratory, UK, and uploaded to GenBank in 2010. The other is from a Mexican *Solanum bulbocastanum* stolen before 1957, digitally sequenced and uploaded to GenBank in 2005 by researchers from Wageningen University, the Netherlands. Both research institutions claimed exclusive commercial (intellectual property) rights for their transformation of stolen indigenous genetic diversity into a digital sequence.

Tracing back to the global North, 2Blades Foundation, a US-based group, is pushing this GM potato onto Rwanda, East Africa, in the form of development aid which grant the group tax deductions. According to ACB, the board of directors are the usual suspects “members with venture capital links and ex-employees of the Gates Foundation, Monsanto, Syngenta and World Bank” (ACB: 2020b: 8). The foundation’s core funding comes from UK’s Gatsby Foundation which serves as a vehicle of a billionaire heir to Sainsbury’s fortune: the UK supermarket chain. Sainsbury, a royally-declared baron, has invested in GM crops since the 1990s, raised conflict-of-interest questions after becoming the UK’s minister of science in 2010 and resigned after “the loans for lordships” scandal which evidenced his making of a secret £2 million loan to Tony Blair’s neoliberal government.

Now, Sainsbury is the Chancellor of Cambridge University and dedicates himself to advancing a GM potato (containing the synthesised gene his laboratory patented) under a charity banner in the form of false aid. To achieve the goal of self-profit maximisation the aristocratic baron has partnered with the Simplots an American cowboy family of industrial and land barons who rule a network of giant corporate potato farms and ranches that total to half the size of Rwanda. Sanisbury provides the capital and legal appropriation of genetic resources and the Simplots provide the ability to land grab and implement large-scale corporate potato farms.

“Potato blight is endemic here in the Andes and elsewhere, so the picture of small farmers in Uganda and Rwanda clamouring for GM potato to save them from a centuries’ old problem that is managed without GM elsewhere sounds like a false and contrived imperialist prank. We know that GMOS are a fad, we know that they are a false solution”.

Ricardo Pacco, [Asociación ANDES](#), Peru

Are GM potatoes trialled from the conditions of mega industrial farms in USA with intensive agrochemical inputs appropriate for Rwanda farmers where 80% work land under 1 hectare, mostly on hillsides without irrigation in vastly different climates and bioregions? `

No

Would these barons or charitable donors benefit from the destabilisation of small-scale farming communities via privatisation of seed, criminalisation of seed saving and sharing, and indebtedness from toxic dependencies on agrochemicals?

Yes

The pushing of inappropriate GM potatoes and the appropriation genetic plant material are intersectional injustices. These inhumanely engineered actions must become legalised crimes with reparations directly given to the co-creators and custodians of our planet’s agrobiodiversity: indigenous and peasants farmers, primarily women, and their territories. The question of how to manage benefit sharing for use of DSI is the most important issue facing the legally binding Seed Treaty (ITPGRFA). “In late 2019, disagreement over

benefit sharing for DSI caused the [seed treaty] to collapse after a 6 year negotiation” and is now an agenda priority for the non-binding Convention of Biodiversity.

This is the time to mobilise, secure legal rights and form extensive alliances to simultaneously dismantle industrial agriculture and white supremacist, patriarchal, colonial capitalism. We can work together to keep alive our rights to food sovereignty via agro-ecological production for just, healthy and decolonised food systems #4.

#4 Feedback from Nora Valgas Valverde, norasvvh(at)gmail.com, Peruvian seed custodian in Amsterdam

Faced with the wave of publicity of the great advantages of hybrid and transgenic seeds as the saviours of hunger in the world, we invite peasant organizations and indigenous peoples that still have seeds preserved over time to install their own demonstration plots and see for themselves the benefits and harms that they have against the genetic wealth that they have protected for thousands of years.

There is a revolution of seeds in the world designed by men who want to crush those that already exist for thousands of years which is resisted by the strength of peasants and mother earth who continue nurturing them. So..? A revolution is also needed of rural women and men capable of deliberating what to keep. To keep their original seeds that are naturally selected over time in harmony with nature and freedom, or to exchange them for those that will yield very well for a campaign that sews dependence on the large seed marketers, disorder in nature that forces the chain of pollutants from the ground, air and water to begin, and even endanger the very lives of those who sew and engineer them.

Finally, the decision makers are those who cultivate the land.

B. The good:

Thanks to the south-south cooperation between the African Centre for Biodiversity (ACB) centred in Johannesburg, South Africa, PELUM Rwanda and Asociación ANDES centred in Cusco, Peru, we have been able to learn more about the global flow and interconnections of the GM seed industry. The good shines light on the bad and in the process the Andes-Africa alliance recently formed. The Andes-African alliance is multi and transnational alliance composing of [“indigenous peoples and small farmer groups representing thousands of potato producers and guardians and civil society organisations and supporters”](#). Andean and African farmers’ perspectives and causes are centred without losing overview on their repressors, in this instance, the European and American billionaire backers of GM potatoes. Agreements were recently made:

- The Alliance will work together to promote indigenous and local food and seed systems and agroecology as the best strategy to produce healthy and nutritious food, while protecting and enhancing ecosystems.
- The Alliance will also work to protect centres of origin and diversity of crops, and the biocultural heritage that goes with it. This means continuing to keep out GM varieties and protecting the rights and knowledge of indigenous farmers, including in relation to DSI.

Another encouraging development are **Open Source Seed Systems** that legally improve farmers’ access and availability to diverse, nutritious and climate-resilient seeds. Once seeds are declared open source they become part of a **legally protected commons** that directly subverts the exclusive UPOV-91/intellectual property rights, i.e. patenting, system. Small-scale farmers and local seed breeders exercise their farmer rights in the Seed Treaty (ITPGRFA) to set up decentralised open source seeds systems. Forums, seed safaris and participatory processes have sewn the way for fruitful collaborations to emerge between civil society, government, private sector, farmer groups and research institutions.

In Tanzania, Hivos East Africa, Biodiversity International, the National Plant Genetic Resources Center, Sustainable Agriculture and Natural Resource Management Africa have partnered with the Tanzania Organic Agriculture Movement and Tanzania Alliance for Biodiversity in 2017 to explore how to institute and legalise open source seeds systems (OSSS). Progress is being made towards formulating and enacting national legal frameworks and policies that protect and integrate informal (non-certified) farmer-saved seeds. This ensures that current legislation is less exclusive and punishing to small-scale farmers and breeders.

They regain their rights to sell seed and cross-breed their traditional and indigenous varieties with other varieties and save them for the future.

In cooperation with neighbouring Kenya and Uganda a digital exchange platform has been created for patent-free seeds with 40,000 farmers, researchers and seed qualities inspectors to ensure that *some* plant varieties and genes remain free from exclusive IPR and private/corporate control. This strengthens and extends seed saving networks. Furthermore, Hivos' program 'Open Source Seed System' has "[brought 2,000 farmers climate resilient genetic material for beans, sorghum and millet](#)". These are encouraging steps as a pragmatic market-based solution favouring small and medium-size seed enterprises as a means to our far greater journey to claim our human rights to access food and nutrition and democratically define our food systems #5. There's still much work and collaboration needed to drastically scale-up the initiative and deepen the decolonisation of its coordination which appears to be directed by Hivos International in the Netherlands. *Update from Hivos: the program in its current form is closing with hopes to develop a digital seed exchange platform in Kenya.*

#5 Feedback from Renée, Barcelona, working with GRAIN

The talk about "compensating" farmers in the South for their genius and work, or promoting "open source" licensing: this can be seen as staying in the same mindset as the one behind the patent system. It can be understood as assuming everything is or should be about property. And that farmers are comfortable with licenses and will be able to control such systems. (We strongly doubt that!) Similarly, the text seems to present QDS in a highly positive light.

You might see this report from farmers in Uganda for some counter views?

<https://www.grain.org/media/W1siZiIsIjIwMTgvMTAvMjkwMTJfMTJhMjM1OTVZ2FuZGFfcmVwb3J0X0VOXy5wZGYiXV0>

"For example, in Iganga District, Uganda, a farmer subjected to this propaganda [that traditional/local seeds are not good enough] explained that she had been told, "the law does not allow the free sharing of farmers' diverse seeds between communities unless they are Quality Declared Seed (QDS)" — a government-approved label for uniform seed. These farmers are seriously concerned that a diverse and sustainable seed system, one that is crucial to enhancing nutrition and sustaining livelihoods, is being targeted in this way."

AFSA & GRAIN report 2018: The real seed producers

A final good example of South-South interactions stems from the work of Dr Melaku Worede, an award-winning Ethiopian plant geneticist, and Dr Regassa Feyisaa, founder of Ethio-Organic Seed Action, who have dedicated their lives to restoring seed diversity in Ethiopia after the devastating famine of mid 80s. After building one of the finest seed conservation centres in the world they collaborated with global allies La Via Campesina, African Biodiversity Network, Gaia Foundation and GRAIN to develop an agroecology apprenticeship programme. In 2012 twenty participants from long-term grassroots partners in Kenya, Ethiopia, Uganda and South Africa completed a specialist training in traditional seed and knowledge revival, and took their learning back to share-in country; and a follow-up training took place in Uganda in 2016. Participants learned how networks seed banks and local markets can be webbed up into what Dr Melaku terms a 'community seed bank complex'. The [climate-seed-knowledge apprenticeship trainings](#) are spreading appropriate understandings and strategies across Africa, from Africa.

Three 30-minute documentaries, produced by the Gaia Foundation and African Biodiversity Network during 2012-2015 ([Seeds of Freedom](#), [Seeds of Sovereignty](#), and [Seeds of Justice](#), freely accessible on vimeo) chart the story of seed from its roots at the heart of traditional, diversity-rich farming systems across the world, to being transformed into a powerful commodity, used to monopolise the global food system. The last in this seed trilogy explores the work of Dr Melaku and Dr Regassa to valorise farmers' knowledge and to put control over seeds back into the hands of farmers, making our food system healthier, more resilient and more just. To find out more about this work and links to other materials, or to support Africa's seed custodians, visit Gaia's website on '[food, seed and climate change resilience](#)', or contact [info\(at\)gaianet.org](mailto:info(at)gaianet.org).

"The foundation for regenerating traditional farming systems is to work with communities to revive their former seed diversity and related knowledge. In most communities in Africa it is the women who have the

greatest knowledge about seed breeding and biodiversity. Once this foundation is laid, scientists can add a little support to further enhance genetic and crop diversity and thereby productivity and climate change resilience.”

Dr Melaku Worede, Ethiopian Plant Geneticist and Right Livelihood Award Winner

C. The actively hopeful:

It's curious and hopefully insightful to reflect on the proportion of attention that different types of seeds have been given in this text and the accompanying writing process. As mentioned at the beginning of the writing, 80% of the seeds used in Africa for farming are traditional and locally adapted varieties which are open pollinated (renewable) and containing biocultural heritage sewn across generations of families and agrarian communities. Yet how much % of the text's content has attended to them? Who should be telling and sharing these stories?

We have mainly focused on the destructive injustices and threats of corporate industrial seeds (GM and hybrids) by tracking their most recent movements into East Africa. We have focused on sharing understanding on the workings of a colonial capitalist mindset applied to seeds. By writing in this way, we centre faceless corporations who use biotech to avoid benefit sharing and push industrial seeds sales in the region. We detailed their forced importation of inappropriate western legal frameworks and their 'gifting' of harmful, dependency-designed aid. This is a human story of a small and disproportionately powerful minority who systematically destroy and exploit Mother Earth – our life support system – and the ecological and indigenous cultures which align most closely to her. This story has demanded so much of our limited energy and attention. Forcing us to understand it's most recent transmutations, multidimensional threats and alarming tendencies in order to better organise and *act against* its relentless [“service to an insatiable death-dealing industrial growth economy”](#).

Perhaps 80% of the content has focused on commercial seeds from the biotech industry centred in advanced industrial hubs in the global North and China. Perhaps 20% or less on the world majority experiences, socio-ecological knowledges and practices of small-scale farmer saved seeds in the global South and beyond. We feel strongly that there is much to learn from and with the actual owners of seeds: the custodians of agricultural biodiversity and sustainable biocultural life in harmony with community and natural processes. Perhaps we can excuse ourselves by leaning on our 'innate' *negativity bias*, claimed as a universal human quality, which is continuously fed, watered and planted again and again by both mass and critical alternative media?

It seems that our attention and actions continue to be mostly fed and led by threat perception and fear of annihilation. Can we shift towards an [active hope](#) allured by healthy and humble opportunities to nourish and flourish with life?

We believe that the life-centred change is possible and already happening. We have tried to showcase that there already exist sufficient strategies to ensure our rights to sustainable livelihoods, to seed and food sovereignty for all peoples and territories. Solutions exist within and between us and our immediate surroundings. They can be exchanged ethically in long-term reciprocal and alliance-forming manners. We can sense we are part of the solutions and we are already learning how to connect and act in unison together across borders. With ample care, time and space we connect and build trust between difference. We cultivate fertile grounds for emergence, new synergies and system-changing ways of living and organising.

We leave you with a taste of what this active hope can manifest into when more attention is dedicated to transnational decolonial alliances that respect each others' rights to self-determine their territories' ongoing cultural and ecological regeneration. May you be inspired and encouraged by this 15 minute new-release: [- Custodians of Life: Reviving Culture and Nature in Uganda's Great Lakes](#)

Please feel warmly welcomed to get in touch ([toby\(at\)aseed.net](mailto:toby(at)aseed.net)) and share any collaborative strategies, actions and learning resources, especially those which move us forwards and raise awareness of the blind spots that we missed by navigating through different intersections.

As we continue to acting, we hope these texts “open the eyes of a new audience to the need to support agricultural biodiversity and heterogeneous peasant seed systems that can enhance peasants' biodiverse

agroecology and food sovereignty (and to join campaigns to challenge and overturn the industrial food system with its legally-protected uniform seeds dependent on agrochemicals)” (Patrick Mulvany with Agroecology Now and CAWR).

As citizens of the world, let’s support the call to action, that started on International Seed Day, April 26 2020, to [Reclaim our Seeds](#) and restore local food systems and agricultural biodiversity as part of a just transition beyond COVID-19!

Recommended Learning Materials:

- To further understand how toxic and ineffective GM crops/seeds are pushed onto Kenya and Uganda:
More toxic GM crops & food for SA; Ineffective GM drought tolerant maize pushed on Kenya and Uganda! Alert report, African Centre for Biodiversity (ACB 2020a).
<https://www.acbio.org.za/en/more-toxic-gm-crops-food-sa-ineffective-gm-drought-tolerant-maize-pushed-kenya-and-uganda>
- For the GM potato pushed onto Rwanda:
GM Potato Push in East Africa: Andean and African farmers condemn digital sequence information of potatoes from centres of origin – open doors for biopiracy. African Centre for Biodiversity (ACB 2020b). <https://www.acbio.org.za/en/gm-potato-push-east-africa>
- For an accessible entry point into seeds as a commons and “open source seed” licencing:
Seed and the Commons. Helen Schulze blog from Sustainable Food Trust.
<https://sustainablefoodtrust.org/articles/seed-and-the-commons/>
- For learning materials and resources shared by HIVO’s Open Source Seed System Program
 - Introduction: <https://www.hivos.org/program/open-source-seed-system/>
 - Options for National Governments to support Smallholder Farmer Seed Systems. The cases of Kenya, Tanzania and Uganda. <https://core.ac.uk/download/pdf/132689815.pdf>
 - 10 rich under-utilised crops in Kenya <https://east-africa.hivos.org/news/10-richunderutilized-crops-in-kenya/>
 - Policy options for OSSS and climate change adaptation. https://www.bioversityinternational.org/fileadmin/user_upload/Building_Otieno_2018.pdf
 - Link to Wageningen’s Seed Center, gene bank and Centre for Genetic Resources (CGN). <https://www.wur.nl/en/Research-Results/Projects-and-programmes/Wageningen-Seed-Centre/Research-Topics/Genetic-resources.htm>
 - And course for Plant Genetic Resources and Resilient Seed Systems for Sustainable Food Security <https://www.wur.nl/en/show/Course-Details-Plant-Genetic-Resources-and-Resilient-Seed-Systems-for-Sustainable-Food-Security.htm>
- For more information about Dr Melaku Worede & Dr Regassa Feyissa’s seed apprenticeship trainings:
<https://www.gaiafoundation.org/what-we-do/food-seed-and-climate-change-resilience/dr-melaku-worede-seed-apprenticeship-trainings/>
- For an introduction to an Earth Jurisprudence Law for an animate Earth
<https://www.gaiafoundation.org/earth-jurisprudence-law-for-an-animate-earth/>
- To learn more about ACB’s press release for the celebration of international seed day, not world intellectual property day: <https://www.acbio.org.za/en/citizens-world-oppose-intellectual-property-over-seed-reclaim-and-restore-local-food-systems-and>
For the specific statement and call to action where you can add your organisation’s name:
<https://docs.google.com/document/d/1PhSxIXYuyrgcW7cGXsr4wTwfyU2HLBd8bRAzDn95A/edit>