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Seed Treaty’s MLS enhancement package risks legitimizing biopiracy and inequity

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For some times now, the International Treaty on Plant Genetic Resources for Food and Agriculture is discussing an expansion of its scope to all plant genetic resources for food and agriculture. Many stakeholders and observers are fearing this would end up in legitimizing biopiracy. As the next meeting will occur in Lima (Peru) starting in November, the 24th, *Inf’OGM* publishes the analysis of Nithin Ramakrishnan, from Third World Network, one of the stakeholders of this meeting.

As the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA, or Seed Treaty) prepares to meet in Lima (Peru), from du 24th to 29th November[i], countries face a critical decision that could risk legitimizing biopiracy and inequity.

It could reshape how the world shares and governs its crop diversity. The *Ad Hoc Open-Ended Working Group to Enhance the Functioning of the Multilateral System (MLS*) of Access and Benefit Sharing has submitted a Draft Package of Measures[ii] that, if adopted, would expand the scope of the MLS from 64 food crops to all *Plant Genetic Resources for Food and Agriculture (PGRFA)*.

The draft is presented as a long-awaited “*enhancement*” of the MLS. After all, who would oppose “*enhancing*” a mechanism supposedly meant to share seeds and the benefits that arise from them? But there is an underlying troubling reality: the proposed reforms threatens to widen the gap between access and fair and equitable benefit sharing, weaken governance, undermine

accountability and transparency, and further undermine the already fragile rights of farmers over the genetic resources they have cultivated for centuries, as well as national sovereignty over those resources.

This draft package set for consideration at the Seed Treaty's 11th Session of its Governing Body (GB11) meeting in Lima deserves a detailed scrutiny. Given the several agenda items to be covered in GB11, it is doubtful whether Contracting Parties can sufficiently focus on this agenda item – which changes the very fundamentals of the Seed Treaty.

This essay takes a brief look at core issues. A brief look which has, as a starting point, the observation that developed countries are currently seeking free access to DSI contained in the PGRFA of the multilateral system, meaning with no requirement of standard material transfer agreement regulating generation of DSI from such PGRFA, their use and benefit sharing. They also oppose proposals to forbid patenting of such DSI, violating Articles 12.3 (d) and undermining the protection granted to farmers' rights under Article 12.3 (e) of the Treaty. Having those two points unresolved will constitute a major breach to the protection of biodiversity.

About the draft package itself, this essay first explains the MLS and current state of play, then addresses the issues such as expansion of access to PGRFA, elusive benefit sharing, digital biopiracy, lack of transparency and accountability, unilateral withdrawals from standard material transfer agreements, weakening of farmers rights and sovereign rights.

Failed promise of the Multilateral System for access and benefit sharing

Adopted in 2001, the Seed Treaty was designed to protect and promote the conservation and sustainable use of plant genetic resources for food and agriculture (PGRFA) – the seeds, tubers, and other plant material that underpin our food systems. Its Multilateral System (MLS) was a remarkable idea: instead of negotiating with countries and provider communities for accessing seeds, countries would create a common regime that covers certain crop varieties – 64 in total – accessible *via* a Standard Material Transfer Agreement (SMTA). In return, users such as seed companies, research institutions, and gene banks would be supposed to share the benefits in a fair and equitable manner, both monetary and non-monetary, flowing from their use. The recipients also accept to not claim any intellectual property on the provided phytogenetic resources, its parts and/or its genetic components.

The principle was elegant: access and benefit sharing (ABS) were to be "*mutually reinforcing*". Access to seeds would promote innovation, and the resulting benefits, *i.e.* knowledge, technology, improved varieties, and profit sharing from commercialization, would return to those who had conserved and provided the resources. The Seed Treaty's architects imagined a virtuous circle between farmers' fields and research laboratories, rooted in fairness and transparency. The 64 crops were chosen for their central importance to food security and the shared dependence of countries on their genetic diversity.

Two decades later, this balance is faltering. While the MLS has facilitated access to millions of seed samples, benefit sharing has remained negligible. Of the more than 7 million transfers of plant materials reported since the Treaty's inception to over 28,000 users, only six users[iii] have made monetary contributions to its benefit-sharing fund. The promised reciprocity has largely failed to materialize. Currently more than 97% of the Benefit Sharing fund comes from voluntary contributions. Around 90% of the Fund is contributed by the States.

However, the Treaty has an inbuilt justification or counter argument to cover-up its failure to generate benefits from the use of shared resources: "*declaring access to PGRFA itself as a major*

benefit". Article 13 declares so, although the provision is very clear that the benefits "*arising therefrom*" such access should also be shared fairly and equitably.

Package to expand access, not to share benefits

Despite failure in benefit sharing, the Treaty is now considering a draft package of measures that prioritizes access while sidelining benefit sharing, directly contradicting the Treaty's Article 10.2 requirement that both be mutually reinforcing.

The most dramatic proposal is to expand the MLS to cover all plant genetic resources for food and agriculture. This essentially means every seed and other planting material with potential value for food and agriculture. Until now, only a negotiated list of 64 crops is included, chosen for their importance to food security and interdependence among nations. The proposed draft abandons this careful selection.

It proposes a one-time, full expansion of the MLS to cover all plant genetic resources for food/feed and agriculture of "*actual or potential value for food and agriculture*", through an amendment of the Treaty. Once a plant's "*potential value*" is claimed, its genetic material would fall automatically within the MLS, forcing countries to share it under the SMTA. In practical terms, this would require all Contracting Parties to make virtually their entire national/governmental seed collections available through the MLS, with no legal guarantee that their part of the corresponding benefits will flow back to them or to the farming communities who originally contributed those seeds.

Similarly, the MLS would pave the way for international gene banks to easily collect the seeds from developing country authorities, and distribute them widely, with almost no measure in place to prevent or reduce the menace of biopiracy. While developing countries are being pressed to share more, there is no corresponding obligation on the international gene banks to report back or inform the countries of origin, whom they are sharing the seeds for what purpose.

The implications are sweeping. Private users could take, experiment, and commercialize seeds from international gene banks, monopolize outcomes of their research, without notifying the countries of origin or farming communities who originally contributed these seeds. Thus the expansion would compel Parties, especially developing countries, to open all their public collections and national gene banks to global access, even though the system still lacks basic accountability and safeguards. Prior informed consent requirements and benefit sharing obligations under the complementary Convention on Biological Diversity (CBD) and its Nagoya Protocol on access and benefit sharing (ABS) would be sidelined too.

Elusive Benefits

With respect to monetary benefits, the draft package touts new payment options for users who "*sell seeds*" incorporating PGRFA received from the MLS – the "*subscription*" and "*single access*" models. But these are merely old mechanisms dressed in new jargon, with very little improvement.

Most glaringly, these options fail to address the fundamental imbalance between the purpose clause of the Treaty, reproduced *verbatim* in the SMTA, and the benefit sharing provisions.

For example, a company brewing beer from barley accessed through the MLS or developing food products from MLS-derived crops need not share monetary benefits because such uses fall outside "*seed (PGRFA) sales*". Similarly, firms that use the Digital Sequence Information (DSI) from MLS materials to develop genetic traits or synthetic food ingredients have no duty to contribute financially to the Benefit-Sharing Fund.

Under the "*subscription*" option, companies pay an annual fee – based on their total "*seed*" sales – in exchange for unlimited access to all MLS materials. However, they can exclude up to two of their most profitable crops from benefit-sharing payments. This "*partial subscription*" would allow major seed companies to avoid contributing on the very crops from which they earn the most revenue.

The "*single access*" option allows users to pay only when they commercialize products developed using MLS materials. Despite its name, it does not limit how much material that can be accessed, creating a loophole that lets frequent users avoid subscription obligations altogether.

In addition, the package now gives users new privileges to withdraw unilaterally from benefit-sharing agreements with no clear oversight by the FAO, which acts as the third party beneficiary and/or guardian of the MLS. The proposals lack clarity about how the MLS deals with commercialization of products developed using MLS materials, once the recipients withdraw from the SMTA.

When it comes to non-monetary benefits, the package literally makes no improvement. Non-monetary benefits, such as technology transfer, collaborative research, or acknowledgment of farming communities' contributions, remain voluntary and largely unenforced. The SMTA only obligates users to share the information that results from their research through a Global Information System established under the Treaty. However, users could still avoid disclosing "*confidential information*" – a term with no qualification or definition in the SMTA. There is no time prescribed for such sharing of information as well. It must be noted that sharing of information resulting from research does not mean the research results are publicly accessible. Such research results, even if information, could very well remain behind paywalls or protected by intellectual property rights.

It is strange that while the SMTA maintains exemptions or discounts to the monetary benefit sharing contributions from the sale of seeds that are "*available without restrictions*" for research and breeding, it does not institute mechanisms such that those seeds are made available through the MLS. This is despite the treaty's proclaimed position that access to PGRFA under MLS itself is the major benefit.

Anonymous use of DSI and digital biopiracy

Perhaps the most complex – and dangerous – issue lies in how the draft treats digital sequence information (DSI), the genetic code derived from seeds, also called "*genetic sequence data*" (GSD).

In the genomic era, physical genetic materials are no longer the only means of accessing seeds. Once a seed's genome is sequenced, its genetic information can be stored in online databases, analyzed, and used to create new varieties or even synthetic organisms without further interaction with the original material. Unfortunately, currently this information is being shared online, where anonymous users can access data and monopolize research outcomes as well as commercialize the same without informing the country of origin or farmer communities who developed the seed from which DSI is extracted.

Adding to this concern, the collect by researchers or not-for-profit entities of the peasants' knowledge associated to this or this plant variety often facilitates free and unaccounted access to such a knowledge with respect to characteristics of PGRFA (traits of interests), further helping in identifying genetic sequences associated with such traits and commercializing the same. Such collection of traditional knowledge also alienates value from farmer communities.

Developing countries have consistently argued, in line with the Convention on Biological Diversity (CBD) and its Nagoya Protocol on ABS, that benefits arising from the use of DSI must also be shared. The 2024 CBD COP Decision 16/2 explicitly recognized countries' sovereign rights to regulate DSI and stipulate benefit-sharing conditions. The 2025 WHO Pandemic Agreement followed similar principles for genetic data.

Yet, the Seed Treaty's draft package moves in the opposite direction. Paragraphs 53 and 55 of the draft resolution reduce benefit sharing from DSI to a mere "*expectation*," and then declare that any such expectation is already met through payments under the subscription model.

Developed countries oppose explicit mention of DSI/GSD both in the Treaty and the SMTA. This means there is nothing binding about generation, storage, use or benefit sharing from the use of DSI in the package of measures. It is astonishing that although the Treaty is being amended to alter the scope of the MLS, there is no proposal to ensure benefit sharing from the use of DSI is also binding. Similarly under the SMTA, there are only two paragraphs dealing with DSI, which are proposed by the developing countries. Again, these paragraphs merely deal with the obligation of recipients of seeds from the MLS with respect to DSI.

As seen at the beginning of the article, developed countries, however, seek free access to DSI contained in the PGRFA of the multilateral system, meaning with no requirement of standard material transfer agreement regulating generation of DSI from such PGRFA, their use and benefit sharing. They also oppose proposals to forbid patenting of such DSI, violating articles 12.3 (d) and undermining the protection granted to farmers' rights under Article 12.3 (e) of the treaty. Furthermore any attempt to define DSI as an integral component of the PGRFA is vehemently opposed by the developed countries. Some of them are of the view that the voluntary mechanism of Cali Fund may address the benefit sharing emanating from the use of DSI.

Thus the package effectively eliminates all obligations to share benefits from the use of digital data generated directly from MLS materials, or accessed from online databases. Recipients can extract, analyze, and commercialize genetic sequences from MLS seeds, via developing profitable bio-informatics services or patenting traits, without returning a cent to provider countries or farmers. Even CGIAR centres like the International Rice Research Centre are set to sell (plans to introduce subscription databases) data developed using this DSI.

The package also fails to establish rules for database accountability. It does not require DSI to be stored in databases answerable to the Treaty's Governing Body or the FAO. It does not call for "*user registration*" in these databases and the need for "*data access agreements*" which obligate users to share benefits. Neither does it contain proposals for persistent unique identifiers that identify sequences with the country of origin or contributing farmers. Instead, it even allows users to mention the MLS itself as the source of the seeds.

This proposal, if adopted, would erase the link between genetic information and the communities or countries from which it originates, legitimizing digital biopiracy under the Seed Treaty. It must be noted that a substantial part of DSI/GSD is already existing in databases unaccountable to the Treaty Governing Body, and this proposal instead of controlling this menace, is going to legitimize such practices, in turn accelerating digital biopiracy in future.

Undermining transparency and accountability

Transparency is central to the credibility of any multilateral ABS system, if it is to be consistent with the objectives of the CBD and its Nagoya Protocol that require access to genetic resources to be appropriate, taking into account all rights over such resources.

The Treaty's Article 10.2 promised a mechanism that is "*efficient, effective, and transparent*". Yet the new draft legitimizes opacity in the name of "*confidential business information*".

Previously, providers of seeds were obliged to report every SMTA signed by them on seeds to the Governing Body for ensuring traceability. Over time, this practice eroded. The Governing Body now receives only aggregate numbers, not details of who received what. This leaves the information on the origin of seeds lost, and the links between access to PGRFA and marketing of new seeds cut off. The new draft legitimizes this practice promoting opacity over transparency, by introducing explicit confidentiality clauses. Under the proposed amendments to Article 5(e) of the SMTA, information on material transfers will be treated as "*confidential business information*", and will be used only for aggregated reporting.

This change would formalize the current practice where only general statistics on the number of SMTAs signed or accessions shared are reported to the Governing Body. The identity of users, the materials accessed, and the nature of resulting products are withheld from Contracting Parties and the public.

Thus, neither national governments nor farmers can track where their genetic resources go, who uses them, or what products emerge. Such secrecy undermines accountability, invites misuse, and limits the ability of farmers or researchers to challenge potential misuse or spurious patent claims on their seeds.

Unilateral withdrawals, eroding oversight

Another concerning innovation in the proposal for revised SMTA is the introduction of unilateral withdrawal rights for recipients after ten years of signing the SMTA. Companies can simply notify the Governing Body and withdraw. There are many nuances relating to the commercialization of benefits developed using the MLS post-withdrawal; they remains either unaddressed or ambiguously touched upon.

Such clauses risk creating an escape route for companies to terminate their obligations just as they begin to reap commercial benefits.

The FAO, acting as the third-party beneficiary on behalf of all Contracting Parties, would have no authority to review or condition such withdrawals. Thus in effect the third-party benefits are revoked without their consent, as parties can unilaterally withdraw from the SMTA. This undermines the FAO's role and contradicts the UNIDROIT Principles on International Commercial Contracts, which stipulate that rights benefiting third parties cannot be revoked without their consent.

Hollow acknowledgment of Farmers' Rights

The Seed Treaty's Article 9 recognizes Farmers' Rights: to save, use, exchange, and sell seeds, and to share in the benefits derived from their resources. Yet in both the current system and the proposed draft, these rights remain largely ornamental.

The draft resolution's sole reference to farmers reads like a disclaimer: the revised agreement "*is not intended to limit*" farmers' rights. This token acknowledgment sidesteps the substantive issue of how the MLS impacts farmers both as providers and as recipients of benefits. It must be noted that there is no obligation in the SMTA on the recipients of seeds to acknowledge farmers' contributions in their research results and/or in their intellectual property claims, even when farmer variety seeds are used or when their traditional knowledge is involved.

Moreover, the definition of "*Plant Genetic Resources for Food and Agriculture under Development (PGRFA-D)*" in the SMTA would continue to weaken the protection farmers' seeds enjoy in the Treaty. By defining PGRFA-D as materials derived only from seeds accessed through the MLS, the text excludes farmers' seeds that are continuously under development in their fields from this protection. This would allow international gene banks or companies to access farmers' seed varieties, available with national gene banks or government institutions (even though they continue to be used in fields), without their consent. This contradicts the Treaty's spirit and its explicit provision, Article 12.3(e), which asserts that farmers retain discretion over their materials as a developer.

Without consent and transparency (as discussed above), farmers could see their seeds transformed into patented varieties that they would then have to buy back. There is also no guarantee that the benefits from the commercialization of MLS resources would directly reach the farmer communities.

Sovereignty constrained in the name of "*enhancement*"

The proposed amendment to Annex 1 to expand the scope of the MLS to all PGRFA also limits the ability of countries to exercise their sovereign rights over genetic resources. It allows them to exclude only a "*certain and limited number*" of species from the MLS and only once, at the time of ratification or accession as the case may be.

They must also "*state clear reasons*" for any exclusion, restricted to legal or cultural grounds. Furthermore, the draft resolution proposes to deny benefit-sharing funds for projects on the crops excluded from the MLS, an implicit threat to those who assert their rights.

This conditional sovereignty is a direct threat to international law on genetic resources. Nations have the inherent right to determine access to their genetic resources. Forcing them to justify exclusions and limiting the exceptions undermines that principle. Such pressure tactics echo a broader trend in global biodiversity governance: the steady erosion of developing countries' control over their biological wealth in the name of "*open access*".

These measures contradict the principle of "*permanent sovereignty over natural resources*" enshrined in international law and reaffirmed in the CBD and its Nagoya Protocol.

Therefore, as the Governing Body convenes in Lima, Contracting Parties – especially from developing countries – must carefully weigh whether this is truly an "*enhancement*" or an erosion of the principles that gave birth to the CBD and the Seed Treaty. The world's food security deserves an outcome that strengthens equity, transparency, and sovereignty, not one that compromises them.

i https://www.fao.org/plant-treaty/eleventh-governing-body/en

ii FAO, ITPGRFA, FOURTEENTH MEETING OF THE AD HOC OPEN-ENDED WORKING GROUP TO ENHANCE THE FUNCTIONING OF THE MULTILATERAL SYSTEM, « Package of measures to enhance the functioning of the Multilateral System: draft negotiating text contained in the Report of the thirteenth meeting », June 2025.

iii Canadian seed company (3187 USD), Nunhems Netherlands BV (732301 USD), Bejo Zaden BV (88135 USD); Uniquest Pty Ltd (218 USD); Zollinger Bio (355 USD); NuCicer (484 USD).

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