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# Deadlock on digital sequencing information within the ITPGRFA

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New negotiations on digital sequencing information within the framework of the ITPGRFA are reigniting tensions between "*developing*" and "*developed*" countries. The latter are imposing guidelines that weaken the claims of the other side and strengthen their control over plant genetic resources. Their weapon? Maintaining "*free access*" to digital sequencing information and parallel and optional benefit sharing, as agreed by the Convention on Biological Diversity.


FAO/Alessandra Benedetti

The 14th meeting of the ITPGRFA (International Treaty on Plant Genetic Resources for Food and Agriculture) Working Group was held from 7 to 11 July in Lima (Peru). This was the last step before the November session of the Governing Body, which is to set the framework for the reform of the

Multilateral System (MLS) of this Treaty. The discussions only served to confirm the imbalance of power between "*developed*" and "*developing*" countries[i], particularly with regard to DSI/GSD (digital sequence information/genetic sequence data): the former reject any binding framework and advocate misleading "*free access*" and "*benefit sharing*".

## The Multilateral System (MLS)

The ITPGRFA (Treaty), adopted in 2001 by the FAO[ii] and entered into force in 2004, is a binding legal instrument that aims to ensure the conservation and "*sustainable*" use of plant genetic resources for food and agriculture (PGRFA). In line with the Convention on Biological Diversity (CBD), the ITPGRFA seeks to ensure the fair and equitable sharing of benefits arising from the use of such resources through the Multilateral System (MLS). The MLS provides access, througha network of public gene banks, to more than 2 million samples of genetic resources belonging to 64 essential crop species, which cover approximately 80% of human food consumption.

This facilitated access to certain agricultural plant genetic resources (for research, breeding and training) removes the need for prior consent from providers and bilateral sharing of benefits under the Convention on Biological Diversity (CBD) between farmers who have provided their seeds to MLS gene banks and their users (mainly the seed industry). It is replaced by a prohibition on claiming intellectual property rights (IPRs) that limit access to the PGRFA provided and by an obligation to pay into a Multilateral Benefit-Sharing Fund when commercialising seeds or plants derived from their use.

## Limitations of the MLS

This mechanism was put in place to guarantee commercial actors easy access to the MLS. At the same time, this system must not restrict farmers' rights to save, use, exchange and sell their seeds, but with one caveat, interpreted by "*developed*" countries as allowing them to adopt laws that contravene these rights: "*in accordance with national laws and as appropriate*". To date, these two provisions have not been respected, according to the International Planning Committee for Food Sovereignty (IPC)[iii] - the only organisation of food producers (farmers, fishers, pastoralists and indigenous peoples) accredited as an observer in this working group - the "*developing*" countries and the Governing Body of the Treaty, which has set up several working groups over the past ten years to address this issue.

The MLS is mainly used by researchers, who are not required to share benefits as they are not commercial actors, except in the case of IPR licensing. The results of the research are passed on to industry, which has already built up its own collections of PGRFA (particularly before the adoption of the Treaty, when seeds were still considered to be the "*common heritage of humanity*" and freely accessible, outside the scope of IPR). The industry only uses the MLS to obtain new PGRFA. US companies, which dominate the market, have free access to the US public collections – the largest in the world – without traceability or benefit sharing.

The ITPGRFA recognises that it cannot control the traceability of PGRFA exchanges between companies, which claim that it is bureaucratically impossible to track the hundreds of crosses required to create commercial seeds. This is why the benefit-sharing fund has remained almost empty, apart from a few symbolic contributions, such as that of the French Semae, intended to demonstrate "*good conduct*".

The rhetoric of the developed countries of *the* "*global North*" is that the MLS is not "*attractive*" to companies, even though it is mandatory, and they are calling for an amendment to the ITPGRFA to

include all *ex situ* resources (conserved outside their natural environment or on farms) and public domain resources (notably soya and tomatoes, which are currently excluded). However, companies already use it indirectly, as researchers sequence the genomes of MLS samples and deposit digital sequence information (DSI) in open-access databases, thus escaping the control of the ITPGRFA. The industry can then exploit this data to obtain patents on genetic traits, limiting access to the original MLS resources and undermining the rights of the farmers who provided them.

## A process of '*improving*' the MLS blocked

A process to '*improve*' the MLS began in 2013 with the creation of a dedicated working group. In 2022, after a few years' hiatus following the United States' accession to the Treaty, the Governing Body commissioned a new working group to "*finalise the improvement of the MLS's functioning*" by its 11th session in November 2025. The 13th meeting of this working group, held last April, revisited the expansion of the list of crops covered by the MLS and the revision of the standard material transfer agreement (SMTA) governing their use.

The "*developing*" countries had expressed their opposition to any inclusion of new species in the list until an agreement had been reached on the establishment of an effective mechanism for sharing benefits. They had also voiced their fears that free access to farmers' and traditional seeds, of which they are the main source, would be undermined without any commitment to benefit sharing and a ban on claiming IPRs on these seeds, their parts and genetic components. This would effectively facilitate the obtaining of patents or other IPRs without any real benefit sharing, to the detriment of these countries and the rights of farmers.[iv]

This 13th working group remained particularly divided on the issue of sharing the benefits arising from the use of IPRs/GSDs, as well as on another important issue, namely whether access to the MLS should be by subscription only or through a dual system allowing users to choose between a subscription option and a single access option[v] . No consensus has yet been reached on the terms of payment to the Benefit-sharing Fund, and the amount has not yet been discussed.

## Deadlock on DSI/GSD governance

The discussions of the 14th working group last July did not resolve the issue of DSI/GSD governance, which therefore remains a major point of disagreement between "*developed*" countries, the main users of this data, and "*developing*" countries, which are the main providers. DSI/GSD represent a major strategic issue for industrial research. Everyone agrees on the establishment of a subscription system for unlimited access to all PGRFA in the MLS, or only to certain species, subject to mandatory payment based on the sales turnover of subscriber companies (seeds and licence fees). This mechanism could guarantee a real sharing of the benefits derived from the use of PGRFA by including them (like physical resources) in the SMTA, thus preventing biopiracy (illegitimate appropriation) of such resources. This sharing is indeed provided for in Article 13.2 of the ITPGRFA on benefits related to the use of resources[vi]. However, "*developed*" countries, such as the United States, European countries and Japan, also advocate a "*single access*" approach to the physical PGRFA of the MLS without any binding legal commitment to pay for the use of DSI/GSD, which remain freely accessible on the internet.

By refusing to include DSI/GSD in the SMTA, the MLS's operational tool for resource transfer, "*developed*" countries would thus avoid any binding obligation to share, whether monetary or non-monetary. This divergence led to a deadlock at the 14th meeting of the working group in July 2025. Proposals by "*developing*" countries to include DSI in the SMTA were left in brackets in the final

document, a sign of this persistent disagreement, which is nevertheless supposed to be resolved by next November.

Furthermore, although the issue raised by the decisions of the last CBD meeting was mentioned, its consequences have not yet been discussed. The CBD considers that DSI/GSD are not components of genetic resources, in which case they would fall within the exclusive competence of the Treaty for PGRFA, but rather products of research. The CBD has therefore decided to set up its own Multilateral Benefit-Sharing Fund for all sales made by sectors using DSI/GSD, including the seed sector, to which all companies that do not already fulfill their obligations to another fund, such as the Treaty fund, should contribute. However, these payments will be optional: between an optional payment and a mandatory payment, it is highly likely that companies will choose the CBD option and will only turn to the MLS for the rare physical PGRFA that they do not already have in their own collections, those of the United States, which do not require the signing of a SMTA, or through private exchanges with other companies or prospecting and research organisations similar to NGOs.

## Controlled "*open access*"

The issue of "*open access*" to DSI/GSD is hypocritical or, at the very least, paradoxical. Behind this reassuring language lies the continuation of a system already established by other international instruments, in particular the CBD. Although the CBD recognises countries' sovereign rights over the genetic resources within their territory, the countries that supply "*genetic resources*" – mainly "*developing*" countries – actually benefit only minimally from the exploitation of these resources by companies in "*developed*" countries[vii] . On the one hand, the provisions of the SMTA are virtually impossible to enforce, and access to DSI/GSD is already largely free on public or private databases, often without any indication of origin or applicable legislation. Supplier countries therefore have no means of ensuring equitable benefit sharing, and 'developed' countries are merely legitimising an existing situation.

Furthermore, the issue of control over these DSI/GSD databases exacerbates this divide. Funded and hosted by "*developed*" countries, they give them arbitrary power over access to the DSI/GSDs they host, which is therefore no longer truly guaranteed. For example, restrictions imposed for political reasons and without any possibility of appeal penalise "*developing*" countries, as was recently the case in the medical field[viii].

## A situation reinforced by patents

This privileged control over DSI/GSD only exacerbates the issue of the appropriation of PGRFA by multinationals in "*developed*" countries through patents based on this information and data. Allowing this situation to continue encourages massive hoarding by these multinationals, effectively restricting access by farmers and local communities to vital resources, prohibiting them through patents or other IPRs from using those they have selected, produced and maintained for generations, depriving them of the benefits of the industrial use of these resources and marginalising them in official discussions.

The refusal of "*developed*" countries to accept binding commitments for genuine benefit sharing that supports farmers, indigenous peoples and gene banks in developing countries and prohibits the patenting of PGRFA (their genetic parts and components) constitutes a further setback for the ITPGRFA. If this trend continues, the MLS will become nothing more than a label allowing "*developed*" countries to consolidate their monopoly on the exploitation of PGRFA, whether physical or virtual, while maintaining a veneer of cooperation. Developing countries, farmers and indigenous

peoples will remain suppliers of free data and will be deprived of real means to protect and enhance their resources and rights. According to the farmers' organisations grouped within the CIP, which have been following the ITPGRFA negotiations for years, it is necessary for the Contracting Parties, in particular the "*developing*" countries, resolve the issue through national legislation, prohibiting the patentability of DSI corresponding to PGRFA included in the MLS and protecting farmers' rights, their seeds and their knowledge against new digital biopiracy[ix].

i These terms are commonly used to refer to these categories of countries. Other terms that may also be encountered include, for example, "*countries of the North (global)*" and "*countries of the South (global)*".

ii Food and Agriculture Organisation of the United Nations

iii International Planning Committee for Food Sovereignty, "Twelfth meeting of the Ad Hoc Open-ended Working Group on Improving the Functioning of the Multilateral System, Rome, Italy, 16-19 September 2024", October 2024.

iv Denis Meshaka, "ITPGR works on controversial reform", *Inf'OGM*, 10 June 2025.

v *Ibid.*

vi FAO, "International Treaty on Plant Genetic Resources for Food and Agriculture," 2009.

vii Denis Meshaka, ""ITPGR works on controversial reform" *Inf'OGM*, 10 June 2025.

viii Richard Stone, "Researchers from China and five other 'countries of concern' barred from NIH databases" *Science,* 10 April 2025.
Liu, H., Liu, Y., Zhao, Y. *et al., "A scoping review of human genetic resources management policies and databases in high- and middle-low-income countries" BMC Med Ethics,* 15 March 2025.

ix International Planning Committee for Food Sovereignty, "IPC shows the way to stop digital biopiracy", 28 August 2025.

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