

Summary of the 2nd Meeting of the Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources of the Convention on Biological Diversity: 12-16 August 2024

Much more than a conservation agreement, the Convention on Biological Diversity (CBD) has been the primary forum for the governance of biodiversity-based innovation since its inception in 1992. Its third objective—fair and equitable sharing of the benefits arising from the utilization of genetic resources—aims to correct historical injustices relating to the ownership and control of genetic resources, traditional knowledge, and biotechnological innovation.

Technological developments have added to the debate. Digital sequence information (DSI) on genetic resources refers to their digitized information content. DSI is increasingly used in biotechnological research and development, including in the pharmaceutical and agricultural sectors. While it can promote biodiversity conservation and sustainable use, it also risks expanding current inequities and compromising benefit-sharing obligations. In this context, CBD parties' decision to establish a multilateral benefit-sharing mechanism from DSI use, including a global fund, as part of the 2022 Kunming-Montreal Global Biodiversity Framework (GBF), was hailed as a major policy development.

At the intersection of environmental, access and benefit-sharing (ABS), and data governance, the multilateral mechanism requires innovative thinking and bold solutions. Tasked with developing the modalities for its operationalization, the Working Group had to address both technical complexities and challenges requiring significant political compromises between countries providing and using genetic resources.

The outcome of the Working Group's week of deliberations is a heavily bracketed recommendation to the Conference of the Parties (COP), including lists of options for its main aspects: the basis and modalities of monetary contributions by DSI users to the global fund; the methodology and criteria for funding allocation; and data governance, including the mechanism's relationship with public DSI databases. Other outstanding issues revolve around: the mechanism's relationship with national ABS measures on DSI; its positioning regarding relevant international instruments, such as the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA); and the legal obligations that parties will accept to enforce to users and databases within their jurisdiction.

Robust technical work and a convivial atmosphere enabled fruitful negotiations at the second meeting of the Working Group. Technical work resulted in a better understanding of the issues' complexities and interlinkages with other processes. Intense intersessional work allowed participants to get to know each other, understand positions, and feel ownership of the process. Combined with the able and charming chairing by Co-Chairs Martha Mphatso Kalemba (Malawi) and William Lockhart (UK), this built an atmosphere conducive to arriving at mutual understanding and compromise.

Thus, despite the amount of work that needs to be completed at COP 16, delegates were optimistic. Consensus seems to be building towards requiring monetary benefit-sharing contributions from all companies in sectors relying on DSI use. This option has the potential to generate a significant amount of funding towards bridging the finance gap of USD 700 billion needed per year to reverse biodiversity loss.

As challenges remain and political decisions are needed, many left the conference venue hopeful that this atmosphere will continue at COP 16, to be held in October 2024 in Cali, Colombia. The work to date has ensured that all the options are on the table, and all that is left to reach agreement is political will.

The second meeting of the Working Group convened from 12-16 August 2024 in Montreal, Canada. Approximately 250 participants attended, representing governments, Indigenous Peoples and local communities, civil society, academia, and industry.

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A Brief History of the Working Group

The CBD aims to promote the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. It was adopted on 22 May 1992 and entered into force on 29 December 1993. There are currently 196 parties to the Convention.

Three protocols have been adopted under the Convention, including the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their Utilization. The Nagoya Protocol was adopted on 29 October 2010, entered into force on 12 October 2014, and currently has 141 parties.

Work on DSI under the Convention began at COP 13 (December 2016, Cancun, Mexico), when parties established an *Ad Hoc* Technical Expert Group (AHTEG) through [Decision XIII/16](#) on DSI on genetic resources.

At COP 14 (November 2018, Sharm El-Sheikh, Egypt), parties established an extended AHTEG, which included the participation of Indigenous Peoples and local communities (IPLCs), through [Decision 14/20](#) on DSI on genetic resources. The AHTEG provided a report on how to address the topic in the context of the negotiations for the GBF.

The Co-Chairs of the Working Group on the GBF, Basile van Havre (Canada) and Francis Ogwal (Uganda), and then CBD Executive Secretary Elizabeth Mrema, in consultations with the Bureau, established an Informal Co-Chairs' Advisory Group on DSI on genetic resources. The Informal Advisory Group worked on potential policy approaches, options, or modalities for benefit-sharing arising out of DSI use.

At its final meeting (3-5 December 2022, Montreal, Canada), the Working Group on the GBF [recommended](#) that COP 15 adopt a decision noting the work of the Informal Advisory Group, and agreeing that benefits arising from the use of DSI on genetic resources shall be shared fairly and equitably. The recommendation included an annex with the proposed policy options on benefit-sharing from DSI use.

CBD COP 15 (7-19 December 2022, Montreal) adopted [Decision 15/9](#) on DSI on genetic resources. The decision established: a multilateral mechanism for benefit-sharing from the use of DSI on genetic resources, including a global fund, as part of the GBF; a fair, transparent, inclusive, participatory, and time-bound process to further develop and operationalize the mechanism to be finalized at COP 16; and a Working Group to undertake further development of the multilateral mechanism, including issues for further consideration identified in an annex, and to make recommendations to COP 16.

The first meeting of the Working Group on Benefit-sharing from the use of DSI on genetic resources convened from 14-18 November 2023, in Geneva, Switzerland. The Working Group developed possible elements of a multilateral mechanism for benefit-sharing from DSI use, including a global fund. It identified elements on which there is potential convergence and elements on which there is a need for further discussion. It also mandated a list of intersessional activities, including information sharing, online informal regional consultations, and an Informal Advisory Group on DSI.

Working Group Report

On [Monday](#), Working Group Chair Ning Liu (China) opened the meeting on behalf of COP 15 President Huang Runqiu, Minister of Ecology and Environment, China. Charles Patton, Mohawk Nation, welcomed delegates to Mohawk traditional territory.

Chair Ning Liu emphasized the historic adoption of the GBF and underscored that the first meeting of the Working Group paved the way for a potential breakthrough on DSI at COP 16. Astrid Schomaker, CBD Executive Secretary, stressed that establishment of the multilateral benefit-sharing mechanism at COP 15 was a watershed moment, adding that a game changer is emerging for biodiversity conservation through the operationalization of a cost-effective, efficient, and simple multilateral mechanism.

Delegates then adopted the agenda ([CBD/WGDSI/2/1](#) and [Add.1](#)). Angela Lozan (Moldova) was elected rapporteur of the meeting. Delegates then established a Committee of the Whole (CoW), co-chaired by Martha Mphatso Kalemba (Malawi) and William Lockhart (UK).

Contact groups under the CoW met throughout the week to address: monetary contributions to the DSI fund; disbursement of funds; review of effectiveness of the multilateral mechanism; non-monetary benefit-sharing; and a formula for funding allocation.

Modalities of the Multilateral Mechanism

On [Monday](#), CoW Co-Chair Kalemba presented the Co-Chairs' reflections on the possible elements identified by the Working Group at its first meeting ([CBD/WGDSI/2/2/Add.1](#)), calling for signals of good will and a spirit of compromise. The Secretariat introduced relevant documents, including a synthesis of information for the mechanism's further development and commissioned studies ([CBD/WGDSI/2/2](#), [Add.1](#), [Add.2/Rev.1](#), [INF/1](#), and [INF/2](#)).

Deliberations started on the basis of the synthesis of information ([CBD/WGDSI/2/2](#)) and continued on the basis of a [non-paper](#) circulated on [Tuesday](#) and a [revised non-paper](#) circulated on [Thursday](#). Egypt, for the AFRICAN GROUP, and Argentina, for the Latin American and Caribbean Group (GRULAC), noted their concerns that the revised non-paper failed to strike a balance between access, fair and equitable benefit-sharing, and data governance, noting that their views and text proposals had not been adequately reflected. On Friday, a footnote about these concerns was added to the report of the meeting.

On Friday, delegates considered a conference room paper ([CBD/WGDSI/2/CRP.1](#)) with the Co-Chairs inviting only minor changes based on previously proposed text, indicating that no new text proposals would be accepted. The CoW approved the CRP as amended. Plenary then adopted a recommendation to the COP on the further development of the multilateral mechanism on benefit-sharing from DSI use, including modalities for its operationalization in an annex ([CBD/WGDSI/2/L.2](#)).

General Statements: On [Monday](#), delegates shared general statements underlining their priorities. Discussions indicated divergence of views on monetary contributions to the fund, disbursement of funds, the role of public databases, and the interface between the multilateral mechanism and national benefit-sharing measures from DSI use.

Senegal, for the AFRICAN GROUP, highlighted the need for the multilateral mechanism to be based on a legally-binding system, aligned with Article 10 of the Nagoya Protocol (global multilateral benefit-sharing mechanism); and supported a global fund, with contributions including a 1% retail levy on products derived from DSI. Fiji, for ASIA PACIFIC, supported a project-based allocation methodology for disbursing funds under the global fund.

Switzerland, also for Japan, the US, the UK, Canada, Australia, Norway, and New Zealand (JUSCANNZ), supported open-access, public DSI databases, and underscored that the multilateral mechanism should not require a track-and-trace system. Cuba, for

GRULAC, noted the need to ensure compatibility with relevant national legislation and international agreements, and underscored the different responsibilities between developed and developing countries in relation to trigger points and technology transfer.

The EU highlighted the need for a level-playing field for all DSI users, and called for clarifying the role of the Global Environment Facility (GEF) to avoid a proliferation of funds. INDIA and others supported that parties retain the option to have national benefit-sharing frameworks from DSI use along with the multilateral mechanism. The US stressed the need for incentives to encourage voluntary contributions to the DSI fund.

CGIAR stressed that the option requiring payments from all commercializing entities within sectors dependent on DSI creates a broader payment base and a level-playing field for all users, and called for mutual supportiveness with DSI benefit-sharing measures developed under the ITPGRFA. The INTERNATIONAL INDIGENOUS FORUM ON BIODIVERSITY stressed that genetic resources from Indigenous territories should never be collected or sequenced without the free prior informed consent (PIC) of IPLCs, noting that IPLCs should be part of the multilateral mechanism's governance structure. THIRD WORLD NETWORK stressed the need to ensure benefit-sharing contributions from DSI users, and to recognize that lack of accountable public databases is a challenge in securing benefit-sharing from DSI use.

Monetary Benefit-Sharing: Provisions related to monetary benefit-sharing and a list of sectors highly dependent on DSI use (titled "enclosure A" in the documentation) were discussed in the CoW on [Monday](#), [Thursday](#) and Friday, and in a contact group facilitated by Eliška Rolfová (Czechia) and Joaquin Salzberg (Argentina) on [Tuesday](#) and [Wednesday](#).

Discussions focused on options for monetary benefit-sharing, including:

- DSI users contributing a percentage of the profits or revenue generated by products and services placed on the market;
- companies in sectors highly dependent on DSI use contributing a percentage of their profits or revenue, accompanied by a list of relevant sectors;
- a proposal by the AFRICAN GROUP for a contribution of 1% of the retail value of all products and services linked to the utilization of biological resources; and
- a proposal by JAPAN where companies actively using DSI on genetic resources are encouraged to contribute a portion of their revenue or profit to the DSI fund.

The contact group discussed in detail the merits and shortcomings of each option and their implementation challenges, along with the need to clarify terminology and further reflect on modalities related to revenue, profit, or sales and other technical issues. Delegates agreed to add a new general clause on benefit-sharing; and discussed how to best refer to contributors to the global fund. They further discussed a list of sectors highly dependent on DSI use (enclosure A), with some suggesting additions.

On Friday, the EU proposed naming the list as "list of sectors or subsectors that directly or indirectly benefit from the use of DSI in their commercial activities." CHILE supported that the sectors "highly rely" on the use of DSI and proposed text that "sectors may be excluded if they demonstrate that they do not highly rely on DSI." JAPAN preferred that the list focus on sectors reliant on the use of DSI. The UK noted that the list would need to be kept under review. CHINA suggested deleting references to the pharmaceutical sub-sectors of pharmaceuticals manufacturing and biopharmaceutics.

The EU proposed an opt-out clause, that entities active in the sectors mentioned that do not benefit from the use of DSI will have the option to provide information in this regard. The list remains in brackets.

Non-Monetary Benefit-Sharing: Items related to non-monetary benefit-sharing were discussed in the CoW on [Monday](#) and [Tuesday](#), and in a contact group facilitated by Nneka Nicholas (Antigua and Barbuda) and Salima Kempnaer (Belgium) on [Thursday](#).

Many delegates, including regional groups, stressed the importance of non-monetary benefit-sharing, including capacity building and technology transfer. A few opposed a trigger for non-monetary benefit-sharing, favoring a bilateral approach. The AFRICAN GROUP proposed establishing a centralized database for DSI under the Clearing-house Mechanism (CHM) to: monitor access to and utilization of DSI, ensuring benefits are shared fairly and equitably; support the capacity of all parties; facilitate information exchange; and assist in monitoring compliance. While some supported the proposal, others preferred use of existing mechanisms. Delegates noted that a list of non-monetary benefits had not been negotiated and agreed to remove it. Some underlined that technology transfer could only take place on mutually agreed terms.

Public Databases: Delegates addressed issues related to public DSI databases and their relationship with the multilateral mechanism on [Wednesday](#) and [Thursday](#) in the CoW.

Discussions focused on possible requirements for entities operating public DSI databases to: make information about the multilateral mechanism and ABS obligations available to users; require provision of information on the country of origin; and apply the principles of findability, accessibility, interoperability and reusability (FAIR) and of collective benefits, authority to control, responsibility and ethics (CARE) to data governance. Delegates debated in particular whether public databases should ensure that published genetic sequences have been obtained legally from the country of access of the genetic resource.

Monetary Contributions to the DSI Fund: Issues related to monetary contributions to the global fund in line with the modalities of the multilateral mechanism were discussed in the CoW on [Monday](#) and [Wednesday](#).

Debate focused on a provision on legislative and policy measures by parties to encourage businesses' contributions to the DSI fund, and, in the case of large and transnational companies, to facilitate such contributions. Some parties wanted to ensure such contributions, while others preferred to incentivize them. There was also discussion whether all companies from all countries should contribute to the fund or only those from developed countries, or only "large and transnational" companies. Delegates further debated: whether contributions to the fund may be made directly or through a relevant national authority; how contributions to the fund are considered in conformity with CBD benefit-sharing requirements; receipts and certificates of compliance; and encouraging additional contributions to the fund from businesses, governments, and others.

Disbursement of Funds: Delegates addressed the disbursement of funds in the CoW on [Monday](#), [Wednesday](#), and Friday, and in a contact group on [Tuesday](#), co-facilitated by Nicholas and Kempnaer.

Discussions focused on options for disbursement of funds:

- project-based disbursement though a country-driven or community-driven process, taking into account indicative allocations for countries and IPLCs, including women and youth, administered by an international entity, such as the GEF; and

- direct allocations to countries, according to an agreed formula reflecting each country's biodiversity richness and level of development.

Delegates discussed the purpose for disbursements, the preferred allocation model, the entity responsible for administering the DSI fund, the need for transparency and accountability, and the criteria and formula for potential direct allocations.

On Friday, EGYPT, opposed by AUSTRALIA, called for deleting reference to national disbursement entities operating according to internationally accepted fiduciary standards. JAPAN proposed that the national entities are audited by the host of the global fund.

CANADA, NORWAY, and AUSTRALIA called for retaining reference to the GEF and the GBF Fund as host institutions for the global fund. INDIA supported deleting the reference. The UK, opposed by ARGENTINA, called for a separate paragraph to list potential host institutions, including the GEF.

BRAZIL proposed deleting reference to the GEF, but underlined the need to refocus the text on the funding principles rather than the host institution. They underlined that some of the world's megadiverse countries are ill-represented in the global financial governance structure under the Bretton Woods Institutions, which act in favor of developed countries. The EU reiterated their skepticism of the fragmentation of the international funding landscape to finance biodiversity, and supported delivering a simple text to the Advisory Committee on Resource Mobilization (ACRM) for further discussion.

Following deliberations in a small group, delegates agreed to delete reference to the administration of the fund under the options proposed and note the fund will be administered by an entity to be decided by the COP, taking into account the Working Group's recommendations and the outcome of the third meeting of the ACRM.

Governance: Delegates addressed governance issues in the CoW on [Tuesday](#), and [Wednesday](#). They considered text outlining: the principles governing the multilateral mechanism and the global fund; the rights of IPLCs over their traditional knowledge, traditional knowledge associated with genetic resources, and genetic resources and data related to them; and the relationship between national ABS measures and the multilateral mechanism, also related to non-duplication of benefit-sharing obligations. The text also addressed cooperation with existing instruments, and the governance role of the COP. Delegates engaged in broad discussions about the relationship between the multilateral mechanism and other ABS instruments, national measures, and other agreements and bodies. They addressed how to avoid double payments of benefit-sharing obligations across relevant instruments.

Delegations also considered a proposal by NORWAY for a collective arrangement to enhance coherence and prevent fragmentation on DSI among relevant instruments, including the World Health Organization (WHO), the Agreement under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Agreement), and the ITPGRFA.

Discussions on this issue continued Friday. Regarding text on respecting the rights of IPLCs over their traditional knowledge and genetic resources, the AFRICAN GROUP indicated that such information should not be "published" without the necessary agreements. The EU opposed and asked to clarify that the rights in this provision do not extend to DSI in public databases, calling to delete the reference to "data related to them." INDIA asked

to include previous COP decision wording qualifying free PIC, including with references to national legislation and international law.

CANADA supported the reference to the rights of Indigenous Peoples and their free PIC, and asked to distinguish them from local communities, only recognizing their rights "as appropriate." COLOMBIA asked to include a reference to Afro-descendants alongside all references to Indigenous Peoples. BRAZIL proposed further addressing this issue at the COP.

Regarding a reference that national ABS measures from DSI should be in alignment with the multilateral mechanism, BRAZIL proposed that national measures be "compatible with the multilateral mechanism." The EU called to ensure no duplication of "obligations to share benefits." The UK asked to specify this is done through the multilateral mechanism.

On cooperation with other international ABS instruments, the AFRICAN GROUP asked to add an additional provision that: where a specialized ABS instrument establishes a multilateral benefit-sharing mechanism from DSI use that is consistent with and does not run counter to the CBD and Nagoya Protocol objectives, the CBD multilateral mechanism does not apply for the parties with respect to the specific DSI covered by the specialized instrument. The EU requested bracketing this addition.

The EU called for reference to "mutually supportive implementation" and to "enhanced cooperation" among the governing bodies of the respective ABS agreements. The UK, opposed by ARGENTINA, asked to add that other international ABS instruments are invited to cooperate with the multilateral mechanism and streamline benefit-sharing processes, where appropriate. ARGENTINA called for indicating this will not affect obligations under other international agreements. CÔTE D'IVOIRE and BRAZIL urged maintaining the general message of mutual supportiveness of international agreements on ABS from DSI, as set out in Decision 15/9.

A number of parties reiterated they are not comfortable with Norway's proposal for a collective arrangement, and NORWAY indicated readiness to withdraw their proposal.

Review of Effectiveness: The review of the effectiveness of the mechanism was discussed in a contact group on [Wednesday](#), co-facilitated by Salzberg and Rolfová, and in the CoW on Friday. Discussions focused on provisions in the non-paper: indicating the effectiveness review timeline; highlighting the role of the indicators of the GBF monitoring framework; and pointing to review criteria (enclosure E). Delegates debated the periodicity and timeframe of the review cycle, initially proposed to begin at COP 18 and every four years thereafter.

On Friday, the EU, opposed by ARGENTINA, ZIMBABWE, and CÔTE D'IVOIRE, expressed reservations about holding the review at COP 18, noting it should take place following the mechanism's operationalization. NORWAY emphasized the review should take place after the first payments are made and the mechanism is fully operational.

On informing the review by relevant indicators of the GBF monitoring framework, the UK, supported by JORDAN, suggested noting that the monitoring framework currently contains a placeholder for a question on DSI under the Target 13 (benefit-sharing) binary indicator. EGYPT, supported by SOUTH AFRICA and ZIMBABWE, but opposed by the EU, suggested adding reference to adaptive management.

On elements to be considered in the review, JAPAN, opposed by the EU, proposed referring to “indicative” elements. JORDAN, ARGENTINA, and SOUTH AFRICA, opposed by the EU, SWITZERLAND, TOGO, AUSTRALIA, and CÔTE D’IVOIRE, noted that information on interactions between the multilateral mechanism and benefit-sharing under the CBD and the Nagoya Protocol fall outside the multilateral mechanism and should be deleted. ARGENTINA, supported by SOUTH AFRICA, but opposed by the EU and SWITZERLAND, further requested deleting an element on information on any multiple payments related to DSI under the multilateral mechanism and national ABS measures.

EGYPT proposed adding information on the relevant measures taken by parties and any implication on the operation of the multilateral mechanism from the operations of public DSI databases, including potential implications for data governance and measures taken by such databases pursuant to the development of the mechanism. The proposals were included in brackets.

The UK proposed referring to national “measures” rather than “arrangements.” CHINA called to include the need to assess the contribution of the multilateral mechanism to the objectives of the CBD and the implementation of the goals and targets of the GBF. BRAZIL suggested adding “information on other issues arising from new and emerging technologies that are relevant for the operation of the multilateral mechanism.”

On summary information on the activities supported by the DSI fund, JAPAN suggested adding the effectiveness evaluation of each project. The EU, supported by the UK and SWITZERLAND, but opposed by ARGENTINA and BRAZIL, suggested reflecting “the possibility of the voluntary extension of the multilateral mechanism on genetic resources in the future.”

On the indicators of the monitoring framework, delegates agreed to include a placeholder, recommending the inclusion in the monitoring framework of a disaggregation by relevant ABS instruments of the headline indicators for GBF Goal C and Target 13 on monetary and non-monetary benefit-sharing, and the following question as a placeholder for the binary indicator as it relates to DSI on genetic resources: “Does your country have administrative, policy or legislative measures pursuant to decision 16/-- on the operationalization of the multilateral mechanism?”

Draft Recommendation: On Friday, the CoW addressed text for the Working Group’s draft recommendation to be forwarded to the COP. The AFRICAN GROUP proposed requesting the Secretariat to establish a DSI database under the CHM for facilitating fair and equitable benefit-sharing, and report on this at COP 18. They also proposed that the database should, among other things:

- enable a safe, secure, accountable, and legitimate method of making DSI and associated traditional knowledge publicly available in accordance with applicable national law, and with the PIC of the provider of the genetic material from which such information is generated;
- provide facilities to generate, store, share, and use DSI on genetic resources for developing country parties that lack capacities, and to receive benefits from such use in accordance with their national ABS systems; and
- support non-monetary benefit-sharing by enabling capacity building, technology transfer, training opportunities, and information sharing among all parties, in particular developing country parties.

The EU and ARGENTINA proposed this could be noted in the meeting report, with CoW Co-Chair Kalemba noting that

delegations will have time to discuss the text of the draft decision at COP 16.

In an evening meeting of the CoW on Friday, the EU opposed inclusion of the African Group’s wording in the draft decision, noting there was no time to discuss it and for others to propose their preferred wording. Co-Chair Kalemba suggested, and delegates agreed, to retain the additions in brackets and to note in the meeting report that the respective paragraphs were not discussed by the Working Group, and there was insufficient time for consideration of additional paragraphs to the draft decision.

Final Outcome: The recommendation on the further development of the multilateral mechanism on benefit-sharing from DSI use, including a global fund (CBD/WGDSI/2/L.2), includes a draft COP decision and the modalities for operationalization of the mechanism in an annex, all in brackets and with several options in key provisions of the modalities.

In the draft decision, the Working Group recommends adoption of the modalities and inclusion in the GBF monitoring framework of a disaggregation by relevant ABS instruments of the headline indicators for GBF Goal C and Target 13 on monetary and non-monetary benefit-sharing, and a placeholder question on the existence of country measures on the operationalization of the multilateral mechanism.

Bracketed clauses refer to:

- lack of accountability, transparency, and inclusive governance in existing public databases and data-sharing practices; and
- a request to the Secretariat for a DSI database under the CHM, to enable safe and legitimate DSI availability and provide to developing countries lacking capacities the facilities to generate and use DSI and receive benefits.

The modalities for operationalizing the multilateral mechanism for the fair and equitable sharing of benefits from the use of DSI on genetic resources, including a global fund, are heavily bracketed and include multiple options on key provisions. They address:

- monetary benefit-sharing obligations of DSI users, including options for contributions to the global fund;
- non-monetary benefit-sharing;
- requirements for public databases;
- party legislative and policy measures, including with regard to public databases and contributions to the fund;
- modalities of monetary contributions to the fund;
- disbursement of funding, including principles, aims, and a formula and options for allocation;
- governance, including general principles, rights of IPLCs, and relationship with national ABS legislation and relevant international agreements; and
- review of effectiveness of the multilateral mechanism.

Four “enclosures” list: sectors relying on DSI; allocation criteria; terms of reference of a group on allocation methodology; and factors to be considered in the review of effectiveness.

Closing Plenary

On Friday evening, Working Group Chair Ning Liu lauded delegates for their hard work over the week, congratulating them on their perseverance and achievements.

CoW Co-Chairs Kalemba and Lockhart reported on the further development of the multilateral mechanism, noting the outcome document represents a delicate balance of opinions. Delegates applauded CoW Co-Chair Kalemba, who will not be attending COP 16.

The Working Group adopted the report of the meeting (CBD/WGDSI/2/L.1), introduced by Rapporteur Lozan, with minor amendments.

Executive Secretary Schomaker lauded the quality and depth of the negotiations and the remarkable facilitation by the Co-Chairs and thanked participants for fulfilling the mandate of the Working Group by delivering a robust outcome navigating a wide spectrum of policy options.

Working Group Chair Ning Liu welcomed the diligent work resulting in: four options for contributions and two for disbursements; a working list of subsectors to be kept under review; elaboration of modalities; the potential for sharing non-monetary benefits; consideration of the relationship with other international ABS agreements; and data governance. He said this constitutes an important step towards implementation of the GBF and closed the meeting at 8:58 pm.

A Brief Analysis of the Meeting

“We are at the cusp of a historic breakthrough.” The opening remarks of the new Executive Secretary of the Convention on Biological Diversity (CBD), Astrid Schomaker, alluded to what is at stake in the negotiations on benefit-sharing from the use of digital sequence information (DSI) on genetic resources.

DSI, a term referring to the digitized information content of genetic resources, is increasingly used in biotechnological research and development, including in the pharmaceutical and agricultural sectors. It has been on the agenda of the CBD and its Nagoya Protocol on access and benefit-sharing (ABS) for approximately a decade. Establishment of a multilateral mechanism on benefit-sharing from its use, including a global fund, in December 2022, as part of the 2022 Kunming-Montreal Global Biodiversity Framework (GBF), was celebrated as an important policy development. The focus now is on defining the modalities for its operation.

This brief analysis focuses on why developing and operationalizing a fair and efficient multilateral mechanism for benefit-sharing from DSI use could be a game changer for biodiversity governance. Next, focusing on the current negotiations, it addresses the governance of the mechanism and other modalities for its operation. Finally, the analysis assesses progress and discusses the main challenges, many of which were addressed at the second meeting of the Working Group, in hopes of reaching agreement at the 16th meeting of the Conference of the Parties (COP 16), to be held in Cali, Colombia, in October 2024.

Why is DSI so Important?

ABS issues have been an implementation challenge for the CBD from the outset, leading to the adoption of the Nagoya Protocol in 2010. Both the Convention and the Protocol envisage a bilateral approach to ABS, between providers and users of genetic resources and traditional knowledge. Rapid technological advancements led to the urgent need to regulate the exchange of dematerialized genetic resources under the placeholder term “DSI.”

Current discussions on DSI address, but are not limited to, sequential molecules, such as deoxyribonucleic acid (DNA), ribonucleic acid (RNA) and proteins (amino acids). The increasing speed and decreasing costs of sequencing has led to an ever-growing amount of data produced and stored in (mostly) public databases, which are used for research and development. To provide an illustration of the pace of technological advances in the field: initiated in the 1990s, sequencing the human genome, which

evidently falls outside the CBD’s scope, took several years and cost USD 100 million. Today, the same genome can be sequenced in less than 10 hours at a cost of only USD 600.

Access to DSI thus replaces the need to physically access biological samples of genetic resources. This has major implications for benefit-sharing requirements under the Convention and the Nagoya Protocol. If open access to DSI is not accompanied by benefit-sharing modalities, the CBD’s third objective, the fair and equitable sharing of benefits from the utilization of genetic resources, will be increasingly out of reach. In contrast, if fair and equitable benefit-sharing from DSI is ensured in conjunction with access to biological resources and genetic information, a significant stream of monetary benefits may be generated. These resources can then be used toward biodiversity conservation and promote further sustainable use.

Experts have emphasized that, depending on the modalities of the multilateral mechanism, an even more transformational change may be within grasp. Often overlooked provisions on non-monetary benefit-sharing, if carefully planned, may offer a vehicle for gradually levelling the global playing field on the use of these rapidly evolving technologies. Information exchange, scientific collaborations, and mainly technology transfer can build capacities and enable developing countries to be full partners in the genomics revolution, according to their own priorities and self-identified needs.

Linking Biodiversity with Data Governance

DSI on genetic resources is largely stored in public databases based in the Global North, which have existed since the late 1970s and operate under the umbrella of the International Nucleotide Sequence Data Collaboration. They largely follow a policy of free and unrestricted access to data, which has repeatedly been highlighted as a benefit in itself. However, benefiting from free access to data requires the capacity not only to access it, but also to store, analyze, and use it. In addition, until very recently, these databases were not cognizant of the ABS realm and may have inadvertently promoted biopiracy—use of DSI arising from genetic resources without the prior informed consent of the country of origin and benefit-sharing, often resulting in products or processes enclosed by intellectual property rights.

Enabled by a series of relevant studies and a good amount of intersessional work, delegates at this meeting of the Working Group were fully cognizant of the interlinkages between ABS and data governance, spending a good deal of time addressing the governance of public databases. The African Group called for establishing a database under the CBD Clearing-house Mechanism. Others called for using current structures and mechanisms. Many emphasized the need for increased accountability, transparency, and inclusive governance in existing public databases and data-sharing practices.

So Close and Yet So Far

Despite the fact that the main parameters of the multilateral mechanism are still to be determined, a sense of optimism prevailed among delegates. Intersessional technical work allowed participants to get to know each other, understand positions, and feel ownership of the process. The convivial atmosphere and the dynamic and charming steering by the two Co-Chairs of the Committee of the Whole, with the Secretariat’s assistance, led to productive suggestions during the week’s deliberations.

Consensus seems to be building towards requiring monetary benefit-sharing contributions from all companies in sectors relying on DSI use. Many hailed this option as providing both a broad payment base and clarity and legal certainty for users. The list of sectors is still under discussion, but currently includes key innovation areas such as agriculture, pharmaceuticals, and cosmetics. This option therefore has the potential to generate funding towards bridging the finance gap of USD 700 billion needed per year to reverse biodiversity loss.

Thus, despite the amount of work that needs to be completed at COP 16, delegates were optimistic and many think that an agreement is within reach. But even if parties agree in principle, many details remain: what will the fixed percentage be and what economic output will be used with alternative options, including profit, revenue, or turnover.

Two main options exist on the disbursement of funds, either project-based or through direct allocations to countries. Both options have their pros and cons. Some pointed out that generating benefits through the use of DSI on genetic resources of sovereign countries and then asking them to compete for funds through project submissions may not be appropriate. They further highlighted long-standing challenges with existing project-based allocations, in particular through the Global Environment Facility. As Brazil highlighted during the closing plenary, country representation under the global financial framework is unbalanced and decision-making often skewed toward developed countries' interests. Many seem to agree that direct allocations could strengthen a sense of ownership of the process. If delegates reach agreement on this option, they will then still have to navigate multiple alternatives to agree on the allocation formula.

Incorporation of traditional knowledge will also be needed for a fair mechanism. The vast, intergenerationally passed on knowledge bases and systems of Indigenous Peoples and local communities (IPLCs) have been (ab)used for decades in commercial applications in the agricultural, health, and other sectors, and DSI use threatens to expand these injustices. Thus, many point to the need to dedicate a benefit-sharing stream to support traditional knowledge and the development of Indigenous and community-based biocultural information systems.

Last but not least, with DSI currently being addressed in several international processes, the relationship of the multilateral mechanism with such processes needs to be clarified. Participants pointed in particular to ongoing negotiations under the International Treaty on Plant Genetic Resources for Food and Agriculture, which considers benefit-sharing from DSI use as part of the revision of its own Multilateral System of ABS. Some noted that developments may lead to a radical restructuring of the international ABS landscape, with hopes for finally effective benefit-sharing. Others noted the need to move towards cooperative arrangements to ensure legal certainty and mutual supportiveness. Yet others noted the need to avoid the risk of double payments under different frameworks, although one stressed that “it should be zero payments, which has been the norm, rather than double payments, that we should be worrying about.”

The Road to Cali

Negotiations on benefit-sharing from DSI are a complicated, multi-faceted task. As Executive Secretary Schomaker noted “DSI brings together scientific analysis, normative work, social justice, environmental governance, sustainable development, and cutting-edge science and technology.” A fair and efficient multilateral

mechanism will require putting together the pieces of a puzzle that links environmental sustainability with equity and fairness in technological progress. While almost all key building blocks of the multilateral mechanism will have to be decided at COP 16, participants shared a positive feeling, captured by the words of the Executive Secretary that “the ship has never been closer to port” or that at least “land is in sight.”

COP 16 will be held in October 2024, which means delegates have entered the final stretch of this negotiating process. While negotiations in Cali are not expected to be easy, as a veteran participant noted at the end of a week of intensive deliberations: “A historic breakthrough is never an easy task.”

Upcoming Meetings

ITPGRFA OEWG 12: The twelfth meeting of the *Ad Hoc* Open-ended Working Group of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) will continue discussing the enhancement of the Treaty’s Multilateral System of access and benefit-sharing. **dates:** 16-19 September 2024 **location:** Rome, Italy **www:** fao.org/plant-treaty/meetings/meetings-detail/en/c/1674748

Summit of the Future: Building on the SDG Summit in 2023, Member States will consider ways to lay the foundations for more effective global cooperation that can deal with current challenges as well as new threats in the future. **dates:** 22-23 September 2024 **location:** UN Headquarters, New York **www:** un.org/en/summit-of-the-future

SBI 5: The fifth meeting of the CBD Subsidiary Body on Implementation (SBI) will take place immediately preceding the UN Biodiversity Conference. **dates:** 16-18 October 2024 **location:** Cali, Colombia **www:** cbd.int/meetings/SBI-05

2024 UN Biodiversity Conference: CBD COP 16, Cartagena Protocol COP/MOP 11 and Nagoya Protocol COP/MOP 5 will address a series of policy, administrative, and implementation-related items of relevance to the CBD and its protocols and the effective implementation of the GBF. **dates:** 21 October - 1 November 2024 **location:** Cali, Colombia **www:** cbd.int/conferences/2024

For additional upcoming events, see sdg.iisd.org

Glossary

ABS	Access and benefit-sharing
CBD	Convention on Biological Diversity
CHM	Clearing-house Mechanism
COP	Conference of the Parties
CoW	Committee of the Whole
DSI	Digital sequence information
GBF	Kunming-Montreal Global Biodiversity Framework
GEF	Global Environment Facility
GRULAC	Latin American and Caribbean Group
IPLCs	Indigenous Peoples and local communities
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
PIC	Prior informed consent