

International Exchange on Digital Sequence Information (DSI)

16 to 18 September 2024, Pretoria, South Africa

Organized by the ABS Capacity Development Initiative
in collaboration with Meridian Institute
on behalf of
the South African Department of Forestry, Fisheries and the Environment (DFFE) and
the Norwegian Government

Hosted by the Government of South Africa

REPORT

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¹ Disclaimer: This report was prepared for the use and benefit of the participants of the DSI Exchange in Pretoria, South Africa, 16 to 18 September 2022, and it is provided for information purposes only. It contains a compilation of the participants’ contributions and discussions. The report, however, does not purport to reproduce all debates and interventions in full. And according to the Chatham House Rule, under which the dialogue was held, the information provided is not attributed to the source. The presenters are, with their explicit permission, identified in the report. The statements in this report do not represent the views or opinions of the of the GIZ, the Governments of South Africa and Norway or the cooperation partners of the GIZ. The ABS Capacity Development Initiative does not assume any liability for the accuracy or completeness of the report.

Short overview and outcomes

On behalf of the South African Department of Forestry, Fisheries and the Environment (DFFE) and the Norwegian Ministry of Climate and Environment, with support provided by the governments of Germany, Switzerland, The Netherlands, Norway and the United Kingdom, the multi-donor funded ABS Capacity Development Initiative, in collaboration with Meridian Institute, organized the International "Exchange on Digital Sequence Information (DSI)". The event was held at *Kievits Kroon Estate, Pretoria, South Africa*, from 16 to 18 September 2024.

The main objective of the DSI Exchange was to take stock of the state of DSI negotiations following the 2nd Meeting of the Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources (OEWG DSI 2) in August in Montreal and to analyse potential implications for commercial and non-commercial users, taking into account sectoral considerations. A "relay" meeting on 18 September provided the opportunity for users to discuss their findings and messages with DSI negotiators from around the world who convened from 19 to 20 September at the same venue.

Of particular importance was the Exchange's aim at increasing mutual understanding of positions and developing ideas to foster convergence ahead of the 16th Conference of the Parties of the Convention on Biological Diversity (CBD COP 16, scheduled for 21 October to 1 November in Cali, Colombia) at which the new multilateral mechanism for sharing benefits arising from the use of DSI (MLM) is to be finalized (see <https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-09-en.pdf>).

The Exchange began with a discussion on the diversity of DSI uses and informing participants about the status of the formal discussions on DSI under the CBD and in other international fora. After taking stock of the outcomes of the DSI working group meeting in August in Montreal, participants were invited to discuss and reflect on the potential implications of outcomes, i.e. the draft decision on DSI for COP 16. The further discussion focused on the three most crucial issues identified by the participants:

- **Scope** of the MLM
- **Money IN**, i.e. who pays what and when into the Global Fund
- **Money OUT**, i.e. how are funds disbursed and to whom

On each of these topics, key messages were extracted by the participants for consideration by negotiators when discussing and adopting the COP16 Decision on DSI in October/November 2024:

Scope

- Users need enough information on scope to be able to practically implement their participation in the MLM and resulting obligations.
- There is a proportional relationship between breadth of scope and value (amount that could be paid) of that scope. A broader scope is worth more (see graph page 2).
- Revenue predictions (e.g. KPMG study²) are based on the biggest circles. If you want larger funds the scope circles need to be big!!!
- We are willing to share monetary benefits for a "licence-to-operate" with a broad scope = broad value (see graph page 4).
- We need to start a journey together with a vision for a stepwise evolving approach to a successful MLM.

Money IN (1)

- Ensure a low fee to NOT eliminate the incentive to innovate in solutions addressing the SGDs. Enable innovation.

² For details see [wgdsl-02-inf-01-en.pdf \(cbd.int\)](https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-09-en.pdf)

- Consider contribution from all entities that benefit, rather than just some users.
- Ensure that users have an all-encompassing assurance of ABS compliance under both national and international law within the scope of the MLM, starting with DSI.
- Consider, as a minimum, an opt-in by providers to include physical GR.
- Ensure that the modality enables easy and swift payments.
- DSI MLM components: (1) Global Fund (2) NMBS

Money IN (2)

- Take care not to trap small businesses in an overregulated system that stifles them with requirements that are difficult for them to comply with.
- Design the system so that users from all countries can contribute to the fund through the MLM, to have a broad payer base and ensure a level playing field.
- Ensure that the MLM has strong incentives for user participation. This means providing broad licence-to-operate throughout the R&D process.
- Compliance with the MLM should be recognised by all participating countries as being compliant with equivalent national obligations.
- The material scope of the licence-to-operate should be as broad as possible (capable of including all non-human DSI and GR).
- Countries also need strong incentives to participate in the MLM. The more countries participate, the broader the licence-to-operate.
- Ensure clarity who should pay, how much, when, to whom and why so that contributors understand how to comply.
- Ensure contribution levels are affordable and proportionate to value and to capacity of contributors to be economically viable for all stakeholders.

Money OUT

- Capacity development and technology transfer is important and should consider local needs. A multilateral NMBS voluntary match-making platform would be contributing to this.
- Consider a strategy for fund disbursement that addresses the Goals and Targets of the KMGBF, specifically relating to capacity building for generating, sharing and using DSI
- The fund disbursement strategy should be transparent, flexible, adaptive, effective, and synergise MBS and NMBS.

Key CBD negotiators from around the world were gathering from 18 to 20 September at the same venue for a separate, but thematically related event – the ‘DSI Retreat’ –, which was organised by the ABS Capacity Development Initiative in the context of the South Africa & Norway Strategic Partnership. Using this opportunity, the 18th of September was devoted to a joint meeting of the participants of both events. Participants of the DSI Exchange presented their messages to negotiators. Both the negotiators and the stakeholders engaged in a lively discussion.

Participants of the Exchange noted that the event was successful in providing an open environment to discuss these critical elements of the future MLM for DSI and appreciated the unique opportunity to discuss directly with negotiators.

Official Opening of the Exchange

All speakers welcomed the participants wishing a successful meeting.

Gaute Hanssen of the Norwegian Ministry of Climate and Environment recalled the breakthrough in establishing criteria during the 1st Informal DSI Dialogue in November 2019 in Pretoria.

Taukondjo Shikongo of the Secretariat of the Convention on Biological Diversity (SCBD) reflected on the first informal user-negotiator exchange organised by the ABS Initiative in Hammanskraal in October 2009 – a time when such exchange about ABS was still thought impossible by most. He pointed out that with DSI on the table, the situation is back at the same point to discuss interests of the different stakeholders, incl. Indigenous Peoples and Local Communities (IPLC). Concluding, he emphasized the need for trust, understanding, and transformation at both the policy and individual levels.

Hartmut Meyer of the ABS Capacity Development Initiative highlighted the long journey since the first DSI dialogue in Pretoria, praising the informal setting for fostering discussions beyond formal positions and supporting the CBD's objectives.

Natalie Feltman of the South African Department of Forestry, Fisheries & Environment (DFFE) extended a warm welcome on behalf of the South African government, and thanked Norway and other donors of the ABS Initiative for their support.

Technical Introduction

Kathrin Heidbrink, co-facilitator of the event, provided an overview of the agenda (see Annex 1) and reminded participants that the meeting takes place under the Chatham House Rule³. A quick sociogram gave an overview about who is in the room: mainly commercial and non-commercial researchers in a good balance, few IPLCs and negotiators; global representation with a majority from Africa and Europe; few economists, some lawyers (public and private law) and social scientists, majority natural sciences (most life sciences, very few chemistry); about one third with practical working experience with DSI.

DSI-versity

With a view to raise awareness in the room on the range and diversity / heterogeneity of DSI use, participants were asked to each write on one card “what they do with DSI” and on another card “how or why this is important”. After putting the cards on a board (for details see Annex 2) participants discussed their observations on the board and what implications result:

- DSI has a wide range of uses, from basic research to advanced biotechnology, making it critical for implementing the Kunming Montreal Global Biodiversity Framework (KMGBF).
- DSI is essential for various fields, but many biodiverse countries, which stand to benefit most, have limited capacity to produce and use DSI. Capacity building is crucial.
- There's concern that overregulation could stifle innovation, especially as technology is rapidly evolving with new uses emerging.
- Society as a whole benefits from DSI, particularly in areas like health, climate change adaptation, and conservation. Any fees imposed should not hinder these positive contributions.
- The diversity of DSI spans species (plants, animals, bacteria) and molecular diversity (proteins, biological functional diversity in cells), requiring complex solutions. A key challenge is ensuring access to diverse DSI while avoiding fragmentation across international mechanisms.
- Negotiators should focus on understanding the broad benefits and needs of DSI, with accessible language and clarity around its applications across sectors.

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Landscape of CBD and other international DSI processes

Hartmut Meyer of the ABS Capacity Development Initiative provided in his presentation (see Annex 3) an overview of the timeline and current status where negotiations in the different fora stand. Neither the BBNJ Treaty, nor the WHO or FAO have (so far) defined DSI and are possibly waiting for the CBD.

- **CBD:** Ongoing process, operationalisation of MLM will be agreed at COP 16. Many of the key issues are still open, such as the contributions and disbursement of the fund, the relationship between monetary and non-monetary benefit-sharing. Opinions on the governance of the fund as well as on the relationship between the MLM and domestic rules are quite diverse.
- **BBNJ:** Treaty is adopted without a definition of DSI, and will enter into force once 60 Parties have ratified. A flexible process for adaptation to implementation experiences made has been agreed.
- **WHO Pandemic Treaty:** Will be legally binding covering genetic resources (GR) and DSI. Triggers for benefit-sharing are still unclear; WHO receives 20% of real-time production of pandemic-related health products from PABS users, other forms of benefit-sharing to be decided upon, including monetary benefit-sharing.
- **FAO Plant Treaty:** Negotiations are ongoing with DSI identified as one of three key topics. Possibly includes monetary benefit-sharing (MBS) in the multilateral system (MLS) of Treaty as part of a possible subscription system.
- **FAO CGRFA:** No mandate for negotiations
- **WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge:** Open to signature, and will enter into force once 15 Parties have ratified; no references to ABS and DSI, "Standard 26" includes disclosure of nucleotide and/or amino acid sequences used in patent applications.

During the ensuing discussion the following points were made:

- There is a need to clarify the scope of DSI use under the Plant and Pandemic treaties. The CBD covers broader uses of biological and genetic resources, unlike e.g. WHO, which focuses on human health.
- The importance of the Pandemic Treaty's benefit-sharing mechanism was highlighted as crucial for creating further benefits. Non-monetary benefit-sharing (NMBS) should include the infrastructure to access and use DSI meaningfully.
- There were concerns that other treaties may not wait for a DSI definition from the CBD, with calls for harmonization across UN processes. It was suggested that any definition should be future-proof and adaptable. Some suggested that constructive ambiguity might suffice, while others called for clearer definitions to avoid confusion in sectors or companies, particularly for uses outside the CBD process. One participant views genetic resources and DSI as equivalent, supporting a broad definition. Others argued that focusing on sectors benefiting from DSI is more important than defining it.
- It was also argued that focusing only on genetic sequences is too narrow, emphasizing the importance of accompanying biological information.
- The cost of maintaining databases that offer open access was suggested as a form of NMBS.

Stocktaking of the outcomes of OEWG DSI 2

With a view to inform and remind participants on where the negotiation process stands, Timothy Hodges, co-facilitator of the event, identified in his presentation five major categories and within each category elements with potential convergence and with further need for discussion (for details see Annex 4).

The presentation was followed by a panel discussion in which two commercial and non-commercial users, who attended the OEWG DSI 2 in Montreal as observers, shared their views on "What was

achieved in Montreal? Where is there emerging agreement?” and “What are the critical unresolved issues?”. After initial statements the discussion was opened to the floor. For concluding the session, the moderator asked the panellists “What is the take-home of the discussion that you did not expect?”

Key points addressed by panellists and participants can be summarised as follows:

Achievements and emerging agreements:

- **Support for Non-Commercial Users:** There is broad support for including NMBS in the MLM, with an emphasis on ensuring non-commercial users are considered and benefit-sharing happens effectively.
- **Complexity of Genetic Resources:** The inclusion of genetic resources was deemed problematic due to its potential to complicate legal certainty. Definitional issues remain unresolved, and some perceived that agreements achieved in prior discussions were revisited.
- **Database and Payment Issues:** Consensus exists around the importance of databases for DSI. However, there is disagreement on making databases a checkpoint under the Nagoya Protocol. Suggestions include regional centres of excellence connected to the international databases or improving existing databases, with varying views on who should contribute financially.
- **Capacity Building:** There is agreement on the importance of using NMBS for capacity building, training, and technology transfer, particularly for developing countries. However, how MBS fits into this remains unclear.

Critical unresolved issues:

- **Negotiation Proposals and Sense of Urgency:** Concern was expressed over the apparent lack of urgency in negotiations, and whether there was a desire for all users and countries to participate in the MLM.
- **NMBS Visibility and Accountability:** Some participants stressed the need to make NMBS visible, proposing a database linked to National Biodiversity Strategies and Action Plans (NBSAPs) to document and categorize NMBS efforts. Others warned against delaying NMBS discussions, noting that a lack of record-keeping could hinder progress.
- **Data Governance and Compliance:** Open access data is considered necessary but must be accompanied by mandatory benefit-sharing mechanisms and clearer data governance.
- **Challenges in User Differentiation and Payment:** Small companies and non-commercial users face confusion about their payment obligations. The possibility of including safeguards and differentiating between small and large users was discussed. Some raised concerns about double payments for DSI, especially if countries maintain bilateral regulations.

Other key issues:

- **Infrastructure and Research Collaboration:** There is concern about unequal collaboration between developed and developing countries, particularly in research infrastructure. Proposals for twinning researchers and sharing infrastructure were highlighted as ways to balance this.
- **Incentives for Participation:** Compliance with ABS regulations is seen as a strong incentive for participation in the MLM. The scope of the mechanism needs to be broad enough to incentivize participation without imposing double payment obligations.
- **Synergistic Approaches:** A call was made for a more integrated approach to monetary and non-monetary benefit-sharing, ensuring both elements work together effectively, especially considering overlaps with capacity development mechanisms under the Nagoya Protocol.

Unexpected takeaways:

- **Complexity of Compliance:** There are challenges in ensuring compliance due to a lack of awareness among users, particularly among smaller institutions. There is a need for better outreach and education to help users understand their obligations.

- **Differentiation of Users:** The need to clearly distinguish between commercial and non-commercial users, particularly regarding obligations like payments for public health-related research, was emphasized.

The discussion highlighted the complexity of establishing the MLM and the ongoing challenges in balancing monetary and non-monetary benefits, user differentiation, and global compliance.

Potential implications of outcomes of OEWG DSI 2 for commercial and non-commercial DSI users

Building on the panel discussion participants were asked to "Write on a card what, in your view, is the most crucial unresolved question". Cards were collected and clustered on a board (see Annex 5). The following topics for focused discussion as basis for the development of messages to negotiators were identified:

- Money IN
- Money OUT
- Scope

Based on this, four groups, a mix of commercial and non-commercial users, were asked to discuss and document on boards "What are absolutely necessary components of a solution? What would be a fantasy scenario? What would be a nightmare scenario?" Due to the high interest two groups were formed for discussing "Money IN".

Money IN /1 (heavy on commercial users)

Absolutely necessary	Fantasy scenario	Nightmare scenario
Biggest pool of payers	Utilising existing tax (VAT % of) system	Utilising existing tax (VAT) system
Smallest pay possible	Allowing for contributions by countries and philanthropists	Fails to address biodiversity crisis
Easy for users to implement (easy + clear metric)	A voluntary subscription system with incentives for contribution including contributions = compliance with ALL intl. frameworks & national laws	Non-commercial entities needing to pay monetary benefits
Make sure the incentives for paying in make sense and work	Licence to use all-encompassing / comprehensible	Very fragmented
Scope of licence to operate in commensurate to payment amount	Tiered rate scheme? (company size / organisations like Havard?)	High fee
Easy for countries to monitor payments	Inclusion of those entities that (only) <u>benefit from the use of DSI</u>	Biased implementation across sectors /regime at nat. level and at intern. level
Identifying metric and rate (in consultation with industry)	Link contributions to environmental, social and governance reporting (at least in EU and Japan)	Unrealistically high expectation from monetary benefit from DSI
All users who generate revenue from the use of DSI are IN	Trust in the system	Biggest nightmare: Big fee, no licence to operate = Nagoya 2.0
Low transaction costs	Appropriate amount of money IN	Trigger at point of or on access
Payment rates = fair share	Including physical GR? (as an opt-IN)	Companies required to monitor NMBS as a part of monetary BS
Includes developing and developed countries' users (but proportional to org. size and/or GDP)		Fragmented implementation at country level
No inhibition of R&D		Too little IN & lack of trust in the system

Absolutely necessary	Fantasy scenario	Nightmare scenario
Links to KMGBF (but not total amount of resource mobilisation)		
Consult <u>economists</u> + financial experts		
Legal <u>certainty</u> : ABS compliance – commercial rights for use – non-military use		
National laws in equivalent scope are superseded		

Money IN /2

Absolutely necessary	Fantasy scenario	Nightmare scenario
Balanced board for fund	DSI Treaty	Donation-based system
Need to establish a fund / fund host	USA is a party to the CBD	NMBS stays <i>ad hoc</i> ; opportunity for improved CHM is lost
Clear instructions on monetary contributions		Non-commercial users having to share monetary contributions
Closing the capacity gap to produce, store, use, benefit from DSI		GEF as fund host
Mandatory contribution for commercial users		Double payment for companies
Strong language in COP decision		
Strong incentives: whitelist/blacklist, green label, good public campaign		
Users in all countries contribute to the fund (sliding scales of contribution level)		
NMB match-making platform and promotion of activities		

Money OUT

Absolutely necessary	Fantasy scenario	Nightmare scenario
Strategy and priorities (framework for supporting KMGBF)	LOTS of money coming in daily from broad payment base	NO money – due to-avoidance and jurisdiction shopping
Transparent, flexible, responsive, able to evolve	Perfect match between capacity needs and capacity development	All money to health and agriculture, none to biodiversity
Substantial and predictable money (+NMBS) coming IN	Enough money to save biodiversity, make DSI fully equitable, reverse climate change	<u>Only</u> DSI supported
Cost-effective: more IN than OUT (compared to administration costs = net benefit)	Adequate DSI capacity in every country (+ sustainable)	All capacity concentrated in China and India, who don't share benefits
High % directly to IPLCs and “on the ground” conservation and sustainable use of biodiversity	<u>User</u> input to disbursement (seat at the table)	Money allocated to government and wasted
Some % used to build DSI capacity		User seat at table (don't prioritise biodiversity conservation and sustainable use or equity)
Make NMBS visible and effective		
Support better access to services for DSI users		

Scope

Absolutely necessary	Fantasy scenario	Nightmare scenario
<u>Jurisdiction</u> : national and non-Party / UN fora	All countries participate in MLM	High price for narrow scope/licence to operate
Physical GR – greater value	Ultimate scope: If you use biodiversity, you pay and have licence-to-operate biggest value on GR and DSI	Not having well defined concepts stifles DSI access and bringing legal uncertainty
The more countries IN, the greater the value for payers	Broader licence-to-operate ->higher contributions to MLM	No legal clarity, fragmented implementation (84 countries)
If it's going to be mandatory, users need to have clear concepts	Broad licence-to-operate: public DSI (\$), all DSI (\$\$), GR & DSI (\$\$\$)	Have to implement DSI and at the same time Nagoya Protocol
Know which R&D activities are accessing via DSI	Level playing field, one set of simple rules for all users in the world	Biological jurisdiction shopping??
Clarifying licence-to-operate from MLM		Shifting R&D to proteins and chemistry

Developing messages from commercial and non-commercial DSI users to negotiators

Based on these outcomes the participants were asked to identify key topics for the messages to negotiators and policymakers meeting at COP 16 to agree on an MLM for DSI:

- The broader the scope the more value is being generated (public DSI, all DSI, plus NP Art. 10).
- Users from developing countries are willing to share monetary benefits under certain circumstances.
- Value of DSI is in its use, but lack of capacity and technology in developing countries.
- Negotiators need to know which incentives users need.
- Important that money OUT supports conservation and sustainable use (including agriculture and health) and related interests of IPLC.
- Wide variety of how companies and non-commercial R&D institutions operate (business models)
- Understanding business models of start-ups in the biotechnology sector: innovation and then licence to, or even acquisition by, large companies.

In the next step, the same groups were tasked with drafting the messages to negotiators on flipcharts, which were refined during the subsequent plenary discussion (see flipcharts in Annex 6) for presentation during the 'Relay' of user messages to key negotiators at the next day.

“Relay” of user messages to key negotiators

The “relay” session before the negotiators’ retreat, taking place at the same venue on 17 and 18 September, provided commercial and non-commercial users of DSI the opportunity to convey to negotiators messages for consideration when discussing and agreeing on a solution for the operationalisation of the Multilateral Mechanism for Sharing the Benefits from the Use of DSI (MLM) at COP 16 in October 2024. The report of the retreat is available at [ABS Biotrade: Digital Sequence Information on Genetic Resources \(abs-biotrade.info\)](https://abs-biotrade.info).

Official Welcome to the Relay

Representatives of the donors, the host, and the organisers of the relay between the DSI Exchange and the DSI Retreat welcomed the participants.

Gaute Hanssen of the Norwegian Ministry of Climate and Environment of Norway highlighted the importance of such informal exchange before COP 16 and the significant progress which has been made since the first Global Dialogue in November 2019 in Pretoria.

Katie Beckett of the UK Department for Environment, Food and Rural Affairs (DEFRA) highlighted the significant and useful contribution of the ABS Initiative to the discussions on difficult topics. She is looking forward to continuing the necessary informal exchange and thanked especially the users for investing their time to participate in these exchanges.

Verena Stöckigt of the German Embassy, on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ), expressed gratitude to DFFE for hosting the dialogue highlighting the German contribution to biodiversity conservation and sustainable use, including ABS and DSI and the long-standing support to the related capacity development, incl. dialogue and exchange events.

Nick Bosmans of the Embassy of The Netherlands thanked South Africa for hosting the event, as well as the ABS Initiative and the other donors. He highlighted that DSI is an important topic for the Netherlands, especially open data and wished good luck to participants for achieving the expected result at COP 16.

Flora Mokgohloa, Deputy Director General Biodiversity and Conservation of the South African Department of Forestry, Fisheries & Environment (DFFE), acknowledged the donors of the ABS Initiative and expressed her hope that the dialogue will help to overcome the still significant different views between Parties to the CBD related to DSI. She referred to the strong African position on DSI related to benefit-sharing in the light of its rich biodiversity and climate change related threats to this biodiversity. In concluding she pointed to South Africa’s commitment to the international CBD process by providing a cochair for the DSI Working Group.

Technical Introduction

Kathrin Heidbrink, co-facilitator of the event, provided a brief overview about the agenda of the Relay (see Annex 1) and reminded participants that the meeting would take place under the Chatham House Rule⁴.

Outcomes from the User’s Exchange

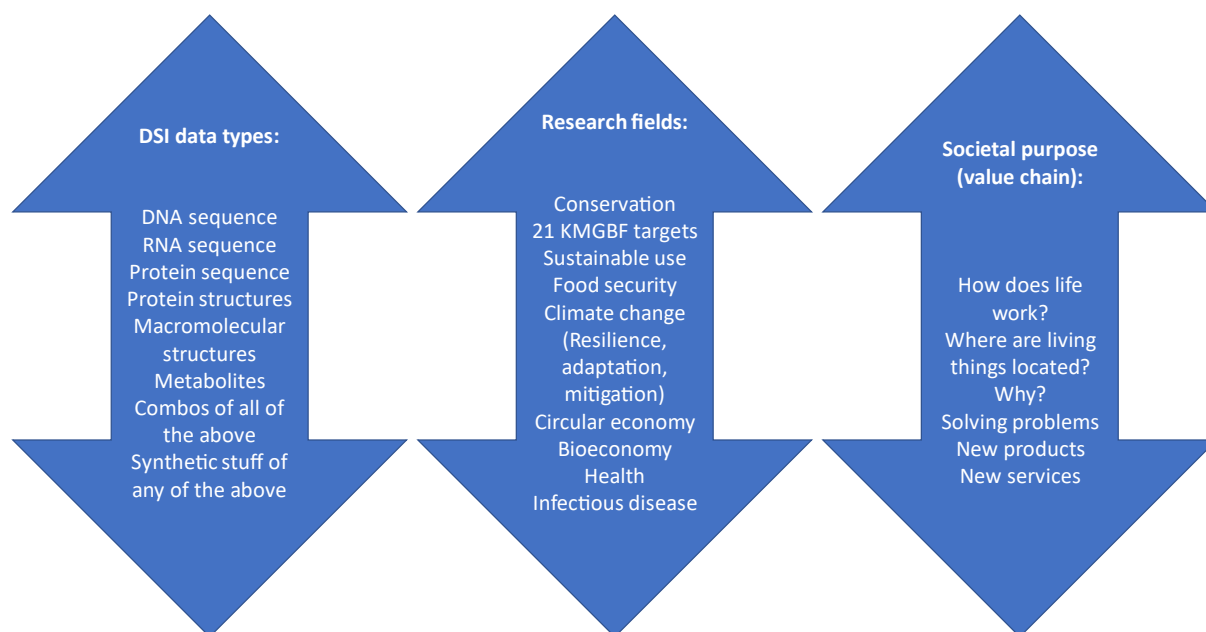
Suhel al Janabi of the ABS Capacity Development Initiative provided a short overview of what was discussed during the DSI Exchange (see Agenda in Annex 1). He pointed out that beside commercial

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and non-commercial users of DSI a small number of resource persons, including a few negotiators, participated in the Exchange.

DSI-versity

Amber Scholz of the Leibniz Institute German Collection of Microorganisms and Cell Cultures (Leibniz DSMZ) illustrated based on the discussions at the preceding Exchange the diversity of DSI uses by using three axes to sort the “DSI-versity” according to (1) DSI data types (molecules in cells), (2) research fields, and (3) societal purpose (value chain) (for further details see her presentation in Annex 7)



DSI can be used in many different ways. To illustrate this, it was noted that each topic within an axis can be combined with any topic in the other two axes and a relevant DSI research question can be generated, such as:

- (1) We want to take a toxic waste product and biologically transform it into a useful product.

Here, a researcher would use “protein sequences” in support of the “circular economy” and “bioeconomy” in support of “solving problems”.

- (2) Is the unknown fish an endangered species?

In this example, a researcher would use “DNA sequences” in a research field related to the KMGBF and Target 4 (for example) and working on the societal purpose “how does life work”.

- (3) How are antibiotic-resistant bacteria evolving?

For this question, you would need a combination of DNA, RNA and likely protein or even metabolite data to understand research related to infectious disease and it is based on an understanding of “where are living things located”.

The figure helps to show how diverse the different types of uses might be.

The answers to clarification questions of the negotiators highlighted how DSI is applied in conservation and sustainable use, addressed the linkage between non-commercial and commercial uses and global disparities in capacity. Key points include:

- **Conservation Applications:** DSI is used in a wide range of conservation efforts, such as forensic research, identifying genetic markers in wildlife, assessing genetic flows, improving crop

resistance, and cleaning up environmental damage through microbial analysis. It helps monitor soil health and track species that are more resistant to environmental changes. DSI also supports the recovery of disappearing livestock breeds, such as tropical cows and chickens.

- **Sustainable Use Applications:** DSI is used to identify fish populations for sustainable fishing, assess biodiversity recovery in agroforestry through environmental DNA (eDNA), and provide agricultural strains for more resilient farming practices.
- **DSI Value Chains:** DSI enters value chains differently depending on its use. Non-commercial users, such as research institutions, publish their findings, which may later be used by companies to develop products. Private databases may complement public databases in these developments. Non-commercial users often contribute to knowledge generation without directly registering patents or creating commercial products.
- **Geographical Use and Capacity Gap:** DSI use tends to occur within the regions where it is sourced. However, low- and middle-income countries publish fewer studies due to a technology and capacity gap. Public funding often supports DSI use, especially in non-commercial contexts, where outcomes include knowledge creation rather than immediate revenue. Some companies focus on increasing shareholder value instead of direct revenue, which adds complexity to negotiations on benefit-sharing.

In essence, DSI is vital for both conservation and sustainable use, but there are significant capacity gaps and complexities in how DSI is utilized across different regions and industries.

Main unresolved issues from the perspective of users, and resulting messages

User messages to negotiators:

Scope

- Users need enough information on scope to be able to practically implement their participation in the MLM and resulting obligations.
- There is a proportional relationship between breadth of scope and value (amount that could be paid) of that scope. A broader scope is “worth” more.
- Revenue predictions (e.g. KPMG study⁵) are based on the biggest circles. If you want larger funds, the scope circles need to be big!!!
- We are willing to share monetary benefits for a “licence-to-operate” with a broad scope = broad value.
- We need to start a journey together with a vision for a stepwise evolving approach to a successful MLM.

Money IN (Group 1)

- Ensure a low fee to NOT eliminate the incentive to innovate in solutions addressing the SGDs. Enable innovation.
- Consider contribution from all entities that benefit, rather than just some users.
- Ensure that users have an all-encompassing assurance of ABS compliance under both national and international law within the scope of the MLM, starting with DSI.
- Consider, as a minimum, an opt-in by providers to include physical GR.
- Ensure that the modality enables easy and swift payments.
- DSI MLM components: (1) Global Fund (2) NMBS

Money IN (Group 2)

- Take care not to trap small businesses in an overregulated system that stifles them with requirements that are difficult for them to comply with.

⁵ For details see [wgdsi-02-inf-01-en.pdf \(cbd.int\)](#)

- Design the system so that users from all countries can contribute to the fund through the MLM, to have a broad payer base and ensure a level playing field.
- Ensure that the MLM has strong incentives for user participation. This means providing broad licence-to-operate throughout the R&D process.
- Compliance with the MLM should be recognised by all participating countries as being compliant with equivalent national obligations.
- The material scope of the licence-to-operate should be as broad as possible (capable of including all non-human DSI and GR).
- Countries also need strong incentives to participate in the MLM. The more countries participate, the broader the licence-to-operate.
- Ensure clarity who should pay, how much, when, to whom and why so that contributors understand how to comply.
- Ensure contribution levels are affordable and proportionate to value and to capacity of contributors to be economically viable for all stakeholders.

Money OUT

- Capacity development and technology transfer is important and should consider local needs. A multilateral NMBS voluntary match-making platform would be contributing to this.
- Consider a strategy for fund disbursement that addresses the Goals and Targets of the KMGBF, specifically relating to capacity building for generating, sharing and using DSI
- The fund disbursement strategy should be transparent, flexible, adaptive, effective, and synergise MBS and NMBS.

Discussion between users and negotiators of outcomes of the Exchange (messages) and implications

The session was split in two parts, a one hour of fishbowl discussion⁶ and a plenary discussion of some key topics that had been mentioned repeatedly in the fishbowl.

The summary of the fishbowl discussion reflects a wide range of concerns, focusing on practical implementation, benefit-sharing structures, ethical considerations, and the capacity gaps between countries:

- **Implementation & Fragmentation:** There are differing definitions of DSI, with calls for a globally uniform system that is simple, affordable from users' perspectives, and legally certain.
- **Incentives & Payments:** Concerns about when payments are due and how to incentivize commercial users. Companies seek clear guidelines to avoid double payments under bilateral and multilateral systems.
- **Capacity Gaps & Practicality:** The MLM should help bridge capacity gaps. Users need practical solutions, but ambiguity in DSI definitions leads to varying interpretations.
- **Conservation & Public Health:** Low payments may limit conservation impact. Public health research may struggle to contribute financially.
- **Ethics & Justice:** Using genetic resources should involve fair compensation to resource owners, as per CBD principles.
- **Delays & Solutions:** Frustration over delays; suggestions for easier implementation, financial/economic expert involvement, and flexible options for different user groups.

⁶ The "fishbowl" method allows for an open, self-organised plenary discussion: All participants stand around a circle of chairs (the fishbowl) in which the discussion takes place. Everyone can participate - with only one rule: Speaking is only allowed while sitting on one of the chairs in the circle. That is, any participant who would like to make a statement can do so by taking a seat in the fishbowl. When the statement is finished, the person gets up to free the chair for other participants.

In this case, there were two chairs for the facilitators, plus four chairs for participants. A time limit of 90 seconds per statement was introduced, which led to a lively participation with a broad exchange of views.

- **Benefit-Sharing:** Non-commercial users are open to sharing knowledge and technology, but research grants often prohibit the latter.
- **Funding & Matchmaking:** Calls for expanded funding sources, ringfencing funds for capacity building, and a platform such as the ABSCH to match users for collaboration.
- **Private Databases & Governance:** Specific regulations also needed for private databases, with ABSCH suggested as a platform for better data governance and compliance.

The subsequent **plenary discussion** was structured by two “burning questions negotiators have for users” regarding “Views on Options A to D” and “What does industry mean by Licence-to-Operate?”.

Key concerns and considerations raised by negotiators and users regarding scope and payment options embedded in Options A to D:

- **Combination of Options:** There is broad support for combining different options, particularly Options A and B, to reflect the varying intensity of DSI use and the differences between companies in scale and structure.
- **Payment Mechanism:** Users suggested payments into a fund could be based on sales, which are audited and numbers often public, rather than profits, which are more volatile. There are concerns about avoiding duplicate payments, particularly when bilateral payments under Nagoya Protocol rules have already been made.
- **Licence-to-Operate:** Questions arise about the implications of the licence-to-operate model and what ideal conditions would look like for its implementation.
- **Industry Concerns:** Industry representatives are wary of potential loopholes that might emerge from combining options and are concerned about increased transaction costs, particularly for SMEs. Ensuring clear, well-defined rules for DSI is a priority.
- **Pilot Programs:** A suggestion was made to pilot Option A for pharmaceutical products, ensuring that no further payments are required if bilateral payments have already been made.
- **Transaction Costs:** SMEs highlighted the importance of keeping transaction costs manageable, as the Nagoya Protocol is already seen as complex.

The concept of a licence-to-operate is centred around creating legal certainty for users who pay into the MLM, freeing them from the complexities of national ABS regulations, though practical challenges—like double payments and treaty overlaps—remain to be solved:

- **Key Concept:** A licence-to-operate implies that once payment to the MLM is made, users would have legal certainty and the right to use DSI freely, regardless of national ABS laws.
- **Legal Certainty & Governance:** Legal certainty is crucial for companies to develop products and applications. This would involve ensuring that DSI published in international databases (like INSDC) complies with national laws. However, about 40 countries have already incorporated DSI into their ABS legislation, complicating the process.
- **Challenges of National vs. Multilateral Systems:** There is a strong suggestion from companies that making payments to the MLM should exempt them from national payments. Currently, no country proposes this exemption. The challenge of separating Genetic Resources (GR) and DSI use across multiple fora (CBD, FAO, etc.) may raise the risk of double payment.
- **Payment Timing and Scope:** Questions arise on the timing of payment and how it relates to the licence-to-operate. There is a suggestion of a system where users would have a licence-to-operate while paying on an ongoing (yearly) basis, with payment amounts varying by sales.
- **Intersection with Other Treaties:** There is a concern over how the MLM will interact with other specialized DSI agreements (like those in FAO or WHO). Transparency between different instruments is essential to avoid double payments and maintain consistency across treaties.
- **Upload of DSI:** Some argue that concerns over illegally uploaded DSI are minimal, as it can be traced back to the uploader and prosecuted under national law.

Annex 1: Agenda of the meetings

International Exchange Digital Sequence Information (DSI)

Monday, 16 th September 2024	
12:00	Registration
12:30	Lunch
14:00	Welcome and introduction to the Exchange <ul style="list-style-type: none"> Welcome remarks; Getting to know each other
14:30	Diversity of DSI – variety of uses by participants
15:15	DSI landscape of CBD and other international processes
16:00	Tea break
16:30	Stocktaking of the outcomes of OEWG DSI 2 <ul style="list-style-type: none"> Panel and plenary discussions
18:00	End of day's sessions

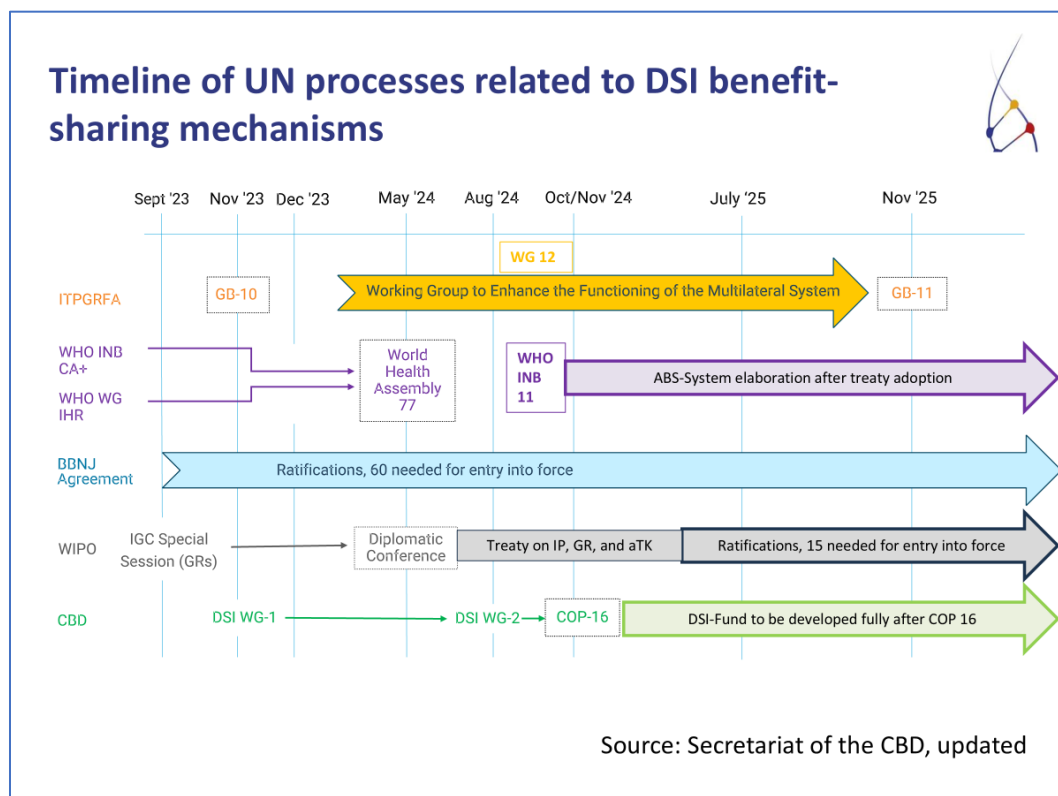
Tuesday, 17 th September 2024	
09:00	Introduction to the day
09:10	Potential implications of outcomes of CBD OEWG DSI 2 for commercial and non-commercial DSI users <ul style="list-style-type: none"> Group work Report-back from group work Plenary discussion
10:30	Tea break
11:00	Potential implications (continued)
11:45	Developing messages from commercial and non-commercial DSI users to negotiators <ul style="list-style-type: none"> Group work; Report-back from group work Plenary discussion and refinement of draft messages to negotiators
12.30	Lunch
14:00	Developing messages (continued) <ul style="list-style-type: none"> Group work; Report-back from group work Plenary discussion and refinement of draft messages to negotiators
17:30	End of Exchange
19:00	Reception by South Arica and The Netherlands for users and negotiators

Relay between Users and Negotiators

Wednesday, 18 th September 2024	
09:30	Welcome and introduction to the Relay <ul style="list-style-type: none"> Gaute Hanssen, Ministry of Climate and Environment, Norway Katie Beckett, Department for Environment, Food & Rural Affairs, UK Verena Stöckigt, Embassy of Germany Nick Bosmans, Embassy of The Netherlands Flora Mokgohloa, Deputy Director General, Department of Forestry, Fisheries and the Environment, South Africa
10:15	Introduction to the Relay <ul style="list-style-type: none"> Who's in the room
10:30	Coffee / Tea
11:00	Outcomes from the Users' Exchange <ul style="list-style-type: none"> The diversity of DSI uses, and potential implications for the MSM Main unresolved issues from the perspective of users, and resulting messages Clarification questions from negotiators, and responses from users
12.30	Lunch
14:00	Discussion of between users and negotiators of outcomes and implications <ul style="list-style-type: none"> Fishbowl discussion Plenary discussion
16:00	End of Relay & tea break
16:30	Side event on DSI products

Annex 2: DSI-versity (collection on cards)

DSI use	Importance
Protein discovery and design	Product and application development
Drug development	Speed up drug development process, have access to info and process it better
Understanding soil processes	Key in conservation efforts
Identify diversity at or below species level	Map out unique national diversity and how it changes through time
Mine marine microbiomes for sustainable ecosystem services and biodiscovery	Find nature-inspired sustainable alternatives
Research involving biodiversity Assessment and trait discovery	Knowledge generation, product development
Develop products and solutions to help farmers feed the world in a sustainable way whilst protecting the environment	World population of 8 billion people, all need to eat food, increasing pressure on land
My institution uses IT for Medical research	It's important, among others for public health
International Genomics research collaborations to understand pathogen spread and evolution as well as generate and share biodiversity reference genome	Understand biology, drive biodiversity protection and recovery to inform public health policy and health interventions
Develop bio-solutions from bacteria and fungi, identification of microbes, protein engineering	Faster and better product development for sustainable human and plant health
Create knowledge from non-sufficiently explored resources	Support creation of goods and services, improve livelihoods of custodians of resources
Development of management tools for plant pathogens	Pathogen control, important to reduce losses due to pathogens
Genetic diversity studies (plants and pathogens)	Diversity studies important for plant/crop improvements and conservation, pathogen identification and control
Coordinating and communication business user perspectives and experiences	Important though not only element needed for bio-based R&I
Unlock potential of biodiversity	Enable higher probability of innovations - societal value
Structure prediction of receptors, enzymes and targets, molecular modelling and docking	In silico assessment
Tool to mobilize resources for biodiversity protection	Estimated USD 200 billion KMGBF funding gap
Interpret barcoding/metabarcoding data to support knowledge about species distribution	Add value to raw sequences generates public-good data
What microbes are present in soil, fresh water, saltwater at different altitudes? How do microbes affect geochemical cycles	Climate change impact
What plants are present in which ecosystems at landscape level?	Understand climate change resilience, adaptations, informs conservation
Identify species, genetic diversity and environmental Information	Generate environmental matrix for monitoring, obtain species specific data for conservation and bioeconomy development
Informs natural product development and innovation, contributes to understanding safety and toxicity	All sources of data are needed/valuable for natural product development and innovation
Develop and improve breeds	Improve livelihoods of custodians of resources
Suppliers provide ingredients developed using DSI for our company to use it in final products	Impact of high benefit sharing payment amounts making its use unfeasible
	DSI should support equitable Benefit-sharing and assist in policy development



Decision CBD COP 15/9 on DSI



The Conference of the Parties,

2. Also agrees that the benefits from the use of digital sequence information on genetic resources should be shared fairly and equitably;
5. Recognizes that tracking and tracing of all digital sequence information on genetic resources is not practical;
6. Also recognizes that a multilateral approach on the sharing of the benefits arising from the use of digital sequence information on genetic resources has the potential to meet the criteria identified in paragraph 9 of the present decision;
10. Recognizes that the monetary and non-monetary benefits arising from the use of digital sequence information on genetic resources should, in particular, be used to support conservation and sustainable use of biological diversity and, inter alia, benefit indigenous peoples and local communities;

3

Decision CBD COP 15/9 on DSI



The Conference of the Parties,

16. Decides to establish, as part of the Kunming-Montreal Global Biodiversity Framework, a multilateral mechanism for benefit-sharing from the use of digital sequence information on genetic resources, including a global fund;
17. Also decides to establish a fair, transparent, inclusive, participatory and time-bound process to further develop and operationalize the mechanism, as outlined in paragraphs 18 and 20 to 22 below, to be finalized at the sixteenth meeting of the Conference of the Parties;

4

Key open DSI issues: CBD – OEWG DSI 1&2



A) Contributions to the fund

- Voluntary or mandatory benefit-sharing
- Type of decision: COP decision, CBD protocol, separate treaty
- Trigger points for benefit-sharing in value-chain
- Calculation method for monetary benefit-sharing

B) Disbursement from the fund

- Access of IP&LCs to the fund
- Participation of countries with domestic DSI legislation in the fund
- Types of disbursement: country allocation, project-based, bidding
- Relation between geographic origin of the GR / DSI and eligibility to receive funds
- Access of developed countries to the fund

5

Key open DSI issues: CBD – OEWG DSI 1&2



C) Non-monetary benefit-sharing

- Types of NMBS in a multilateral mechanism
- Trigger points for NMBS in a multilateral mechanism
- Way of delivery of NMBS in a multilateral mechanism
- Need for an international platform organising NMBS

D) Governance

- Right- and stakeholders participating in the fund's governance
- Reform of the Global Environment Facility (GEF)
- Localisation of the fund – GEF, GBF Fund, separate fund
- Ensuring transparency, accountability, interoperability
- Not challenging open access to DSI
- Not challenging the rights of IP&LCs

6

Key open DSI issues: CBD – OEWG DSI 1&2



E) Relation to other approaches and systems

- Creation of an inter-forum body or process for coordination between the fora
- Extension of the multilateral mechanism to genetic resources
- Relationship between multilateral DSI mechanisms and any domestic rules

7

Key open DSI issues: UNCLOS Biodiversity Beyond National Jurisdiction



Monetary benefit-sharing for marine genetic resources and DSI

- No definition of DSI, waiting for the CBD
- After entry into force, developed State Parties will share monetary benefits in the form of decoupled payments based on the State Parties' assessed contributions to the BBNJ core budget
92 signatories – 8 members as of September 2024
- Taking into account recommendations by the access and benefit-sharing committee, the COP will after 5 years decide each 2 years on other modalities, e.g., introducing milestone payments or payments of percentage of the revenue from product sales
- Payments and benefit-sharing from the use of DSI go into a fund under GEF and into a “special fund”; a future COP will decide on its nature and institutional home

8

Key open DSI issues: WHO Pandemic Treaty



Setting up a legally-binding Pandemic Treaty until May 2026

Content of draft PABS text of September 2024:

- Language not precise yet: benefit arising from access / sharing / utilising material and information; streamlining necessary
- No definition of DSI, waiting for the CBD
- Implementation mutually complementary with the Pandemic Influenza Preparedness Framework, the CBD, and the Nagoya Protocol
- WHO receives 20% of real-time production of pandemic-related health products from PABS users
- Modalities, terms, conditions, and other forms of benefit-sharing to be decided upon, including monetary benefit-sharing
- Distribution mechanism to be decided upon

9

Key open DSI issues: FAO International Treaty on Plant Genetic Resources for Food and Agriculture



Negotiations on revision of the multilateral system incl. DSI restarted in September 2022

- DSI identified as one of the three key hotspot topics
- No definition of DSI, waiting for the CBD
- The multilateral system could include monetary benefit-sharing for the use of DSI as part of the discussed subscription system
- Negotiations ongoing, next Governing Body is meeting in November 2025

10

FAO Commission on Genetic Resources for Food and Agriculture & WIPO



FAO CGRFA


- Consultations on DSI with the aim of recommendations but no decisions or obligations on member states expected

WIPO

- Standard 26 on nucleotide and amino acid sequence disclosure in a patent application entered into force in July 2023, might support identification of DSI-based inventions and products
- Diplomatic Conference in May 2024 adopted a Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge that contains no references to ABS and DSI
- Open to signature until May 2025, entry into force needs 15 ratifications

11

Annex 4: Outcomes of the OEWG DSI 2, by Timothy Hodges, McGill University



**THE ABS
CAPACITY
DEVELOPMENT
INITIATIVE**

**L'INITIATIVE DE
RENFORCEMENT
DES CAPACITES
POUR L'APA**

Outcomes of the Second Meeting of the Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of DSI on Genetic Resources

Timothy J. Hodges
McGill University

Second Meeting of the DSI OEWG


Montreal, 12-16 August 2024


- Draft recommendation including Annex 1: 'Modalities for operationalizing the multilateral mechanism for the fair and equitable sharing of benefits from the use of digital sequence information on genetic resources, including a global fund'

- a. Triggers (basis and modalities) for benefit-sharing
- b. Non-monetary benefit-sharing (NMBS)
- c. Fund distribution and disbursement
- d. Fund host
- e. Data governance

All of the above split into:

- *Elements on which there is potential convergence*
- *Elements on which there is need for further discussion*





Convention on Biological Diversity

Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources

Second meeting
Montreal, Canada, 12-16 August 2024

Agenda Item 1
Further development of the multilateral mechanism for benefit-sharing from the use of digital sequence information on genetic resources, including a global fund

Recommendation adopted by the Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources on 16 August 2024

2/1. Further development of the multilateral mechanism for benefit-sharing from the use of digital sequence information on genetic resources, including a global fund

The Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources,

Recalling paragraph 1 of the Recommendation 2/1 of the Subsidiary Body on Scientific, Technical and Technological Advice, in which the Subsidiary Body invited the Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources to develop options for the indicators on the sharing of benefits from the use of digital sequence information that could be included in the monitoring framework for the Kunming-Montreal Global Biodiversity Framework;

1. *Recommend the inclusion in the monitoring framework for the Kunming-Montreal Global Biodiversity Framework of a disaggregated by relevant access and benefit-sharing indicators of the benefits indicators for Goal 4 and Target 13 on monetary and non-monetary benefit-sharing, and the following question as a placeholder for the binary indicator on its relation to digital sequence information on genetic resources: "Have your country have administrative, policy or legislative measures pursuant to decision 1/10 on the operationalization of the multilateral mechanism";*

2. *also recommends that, at its nineteenth meeting, the Conference of the Parties adopt a decision along the following lines:*

The Conference of the Parties,

Triggers for Benefit-Sharing



Elements on which there is potential convergence

- **Commercial users** should share benefits arising from the use of DSI
- Need for some sort of **economic or social incentive** for user compliance

Triggers for Benefit-Sharing



Elements on which there is a need for further discussion

- The verb
 - Users of DSI [**are encouraged to**], [**will**], [**should**], [**shall**] share benefits
- Subject
 - **DSI Products** [and services] that have benefited from [been developed or created using] [linked to] the use of DSI,
 - [active] **users of DSI** [highly-reliant] [direct and/or indirect beneficiaries], **in sectors** [highly] **reliant on DSI**
 - List of Sectors in Enclosure A
- Basis for payment
 - **Metric**: profits, revenue, turnover, sales, product retail value
 - [indicative] **percentage** to be contributed
- Location of users to share benefits
 - Users in **all countries** or in **developed countries**

Non-monetary Benefit-Sharing



Elements on which there is potential convergence

- **All users (commercial and non-commercial) should share** non-monetary benefits arising from the use of DSI
- Some Parties underlined that **sharing non-monetary benefits should not make users exempt** from sharing **monetary benefits**

Non-monetary Benefit-Sharing



Elements on which there is a need for further discussion

- Relation of NMBS to the MLM
 - a. NMBS financed **through the global fund**, with a **specific portion** of the fund **reserved for NMBS**, capacity development, and technology transfer
 - de-linking of benefit provision from specific DSI users, project-based provision
 - b. NMBS through **mechanism distinct from the global fund** (for example, a clearing-house)
 - could allow match-making, sharing information on DSI use, monitoring NMBS; existing (bilateral) NMBS could continue
- Users & Recipients Roles
 - Non-commercial users in **developing countries solely as recipients** of NMBS or **encouraged / expected to share non-monetary benefits** as well
 - Should NMBS function **through national authorities** or should **private or public actors apply directly** to the mechanism (clearing-house) for projects and/or NMBS

Fund Distribution



Elements on which there is *potential convergence*

- funds should be used for *inter alia* **building of DSI-related capacity** and realizing the **objectives of the Convention CBD and the KMGBF**
- funding in the global fund should be allocated in a **fair, equitable, transparent, accountable and gender-responsive** manner

Fund Distribution



Elements on which there is *a need for further discussion*

- Disbursement through **direct allocation to countries** or through a **project-based system**
- **Formula** for country allocations
 - Elements for developing a formula in Enclosure B
- Possibility of **establishing an Ad-hoc Technical Expert Group or a Working Group** for further advice and clarification
- **Direct access** to funds **for IPLC**
- **Specific use** of the funds beyond the points of convergence

Fund Host



Elements on which there is potential convergence

- should be operated under the **authority and guidance** of and **be accountable** to the **CBD COP** as stipulated by Art. 21 of the CBD
- fund needs to **be compatible with** whatever **system is set up for the KM-GBF** via the resource mobilization negotiations
 - discussions of the fund equally dependent on the outcomes of the Advisory Committee on Resource Mobilization

Fund Host



Elements on which there is a need for further discussion

- Hosted by the **GEF/GBFF**
 - Concerns: little flexibility to adapt to needs of the global fund, biodiverse developing countries and IPLCs underrepresented in decision-making, insufficient transparency regarding the impact of disbursed funds, inability to provide funding for developed countries
- Hosted by a **new entity immediately** or **hosted in a temporary location** before being moved into the **new DSI global fund**
 - Concerns: insufficient transparency regarding the governance of the fund

Data governance



Elements on which there is a need for further clarification/discussion

- Novel proposal: **creation of a CBD-run database** to
 - make DSI available to users ensuring the use of DSI in accordance with providing countries' national ABS laws
 - provide information about the country of origin of the GR and aTK attached to the DSI
- **Requirements** for data governance re **existing databases**
 - Make information about the MLM available to users of DSI related to the fair and equitable sharing of benefits arising from its use
 - Inform of the requirements to comply with applicable national and international ABS obligations with respect to GR and DSI
 - Require information on the country of origin of the GR from which DSI is derived as well as aTK
 - Apply FAIR and CARE principles to data governance
 - Accept new submissions of DSI only if accompanied by permission for publication by CNA of country of origin
 - Parties funding, sponsoring or hosting databases ensure implementation of data governance decisions

Miscellaneous



Recommendation to SBSTTA

- *Decides to develop specific frameworks for sharing non-monetary benefits for the sectors listed in enclosure A to the annex, on the basis of the needs identified by Parties;*
- *Requests that the draft frameworks be presented to the Subsidiary Body on Scientific, Technical and Technological Advice for review, with a view to having them adopted at the [XXth] meeting of the Conference of the Parties*

COP 15 Decisions: DSI*



The DSI Nine (DSI 9)

Solution for fair and equitable benefit-sharing on digital sequence information on genetic resources should, inter alia:

- Be efficient, feasible and practical
- Generate more benefits, including both monetary and non-monetary, than costs
- Be effective
- Provide certainty and legal clarity for providers and users of digital sequence information on genetic resources
- Not hinder research and innovation
- Be consistent with open access to data
- Not be incompatible with international legal obligations
- Be mutually supportive of other access and benefit-sharing instruments
- Take into account the rights of indigenous peoples and local communities, including with respect to the traditional knowledge associated with genetic resources that they hold;

COP 15 Decisions: KMGBF



The DSI Nine Plus One (“DSI 9+1+1”)

GOAL C

Monetary and non-monetary benefits from the utilization of genetic resources and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments.

TARGET 13

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

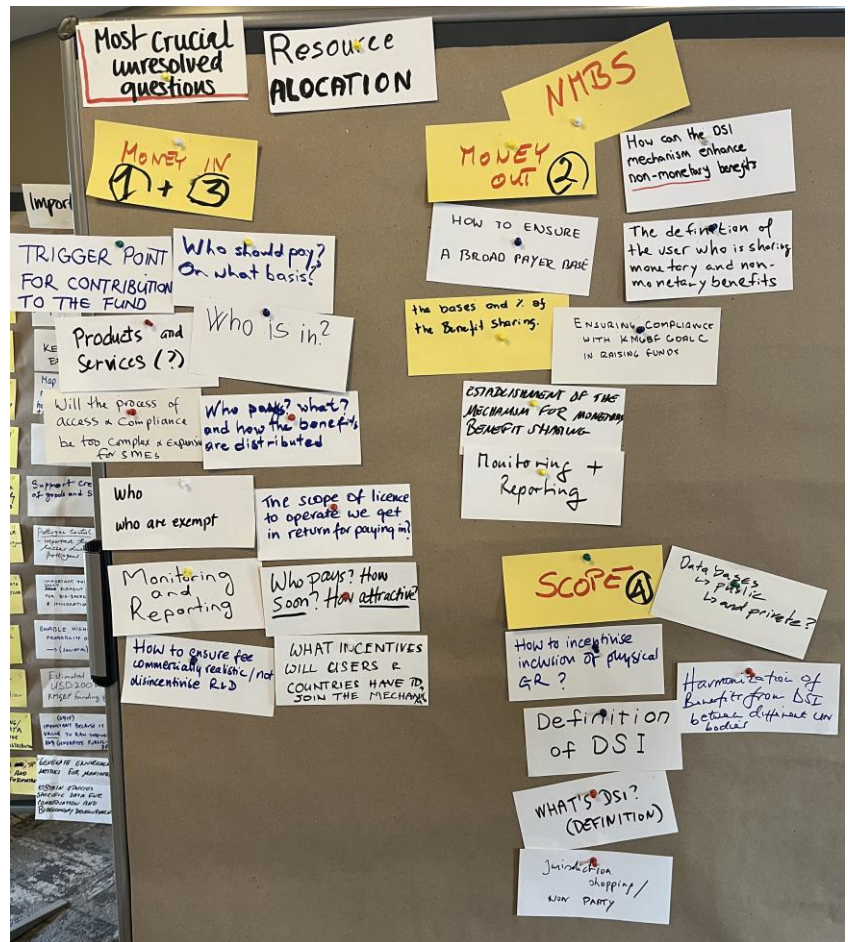


Thank you!

Annex 5: Most crucial unresolved question

Money IN

- Trigger point for contribution to the fund
- Who should pay? On what basis?
- Products and services (?)
- Who is in?
- Will the process of access and compliance be too complex and expensive for SMEs?
- Who pays? What? And how the benefits are distributed
- Who? Who are exempt?
- The scope of licence-to-operate we get in return for paying in?
- Monitoring and reporting
- Who pays? How soon? How attractive?
- How to ensure fee commercially realistic / not disincentivise R&D?
- What incentives will users and countries have to join the mechanism?



Money OUT, incl. NMBS

- How to ensure a broad payer base?
- Definition of the user who is sharing monetary and non-monetary benefits
- The basis and percentage of the benefit sharing
- Ensuring compliance with the KMGBF Goal C in raising funds
- Establishment of the mechanism for monetary benefit sharing
- Monitoring and reporting

Scope

- How to incentivise inclusion of physical GR?
- Definition of DSI
- What's DSI? (Definition)
- Databases: public (and private?)
- Harmonisation of benefits from DSI between different UN bodies
- Jurisdiction shopping / non party

Annex 6: User Messages to Negotiators

Scope

1. Users need enough information on scope to be able to practically implement their participation in the MLM and resulting obligations
2. There is a proportional relationship between breadth of scope and value (amount that could be paid) of that scope.
A broader scope is worth more.

"Money in"

1. Ensure a low fee so as to not hinder the incentive to innovate in ~~nature-based~~ solutions (enable innovation) addressing the SDGs.
2. Consider contributions from all entities that benefit, rather than just some users.
3. Ensure that users have an ~~DSI~~ all-encompassing assurance of ABS/compliance (licence to operate) under both national laws and international fora, within the scope of the MLM, starting with DSI.

Money In (contd)

4. ~~Ensure that users~~ Consider as a minimum an opt-in to include physical genetic resources ^{by genetic providers}.
5. Ensure that the modality of ~~payment allows users to pay easily and soon~~ enables easy and swift payments.
6.

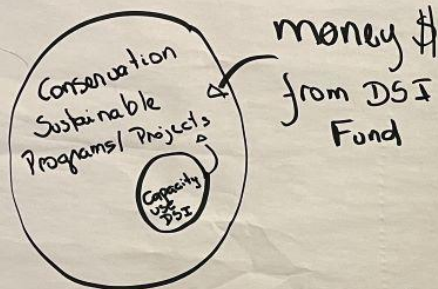
DSI MLM Mechanism

<p>monetary benefits</p> <p>↓</p> <p>global fund</p>	<p>non-monetary benefits</p> <p>↓</p> <p>-matchmaking -increase visibility</p>
--	--

"Money in"

- Take care not to trap small businesses in an over-regulated system which stifles them with requirements that are difficult for them to comply with.
- Design the system so that users from all countries can contribute to the fund through the MLM, to have a broad payer base + ensure a level playing field.
- Ensure clarity as to who should pay, how much, when, to whom and why so that contributors understand how to comply.
- Ensure contribution levels are affordable + proportionate ~~affordable~~ to value and to capacity of ~~user~~ contributors to be economically viable for all stakeholders.
- Ensure that the MLM has strong incentives for user participation. This means providing broad licence-to-operate throughout the R&D process.
 - Compliance with the MLM should be recognised by all participating countries as being compliant with equivalent national obligations.
 - The material scope of the licence-to-operate should be as broad as possible ~~too~~ (capable of including all non-human DSI + GR)
- Countries also need strong incentives to participate to in the MLM. The more countries which participate broadens the licence to operate.

"Money out"



- * Capacity ~~building~~ ^{development + tech. transfer} is important and should consider local needs!
- * Consider a strategy for fund disbursement that addresses the Goals + Targets of the KM-GBF, Specifically relating to capacity building for generation, sharing and using DSI.
- * The ^{mechanism} fund disbursement strategy should be transparent, flexible, ~~and~~ adaptive, effective, and synergise MBS + NMBS.
- A multilateral NMBS voluntary watch-making platform would be contributing to this.

Annex 7: DSI-versity, by Amber Scholz, German Collection of Microorganisms and Cell Cultures (DSMZ)

