

# The CBD DSI matrix: How do the DSI policy options measure up?

On behalf of the DSI Scientific Network | September 2022



## GO

**The DSI Scientific Network supports options that can decouple access to DSI and benefit sharing (2.2, 3.2, 4, 6):**

- Access to DSI remains open and benefit-sharing is triggered by the outcomes of utilization, for example the successful commercialization of a product and a backend or downstream payment or levy.
- De-coupled options can be combined, and open access won't be compromised.
- Option 6 is most likely to support research, strengthen conservation and sustainable use, and ensure benefit sharing. One key unanswered question is whether all DSI will be handled in a multilateral manner or whether and how extensive bilateral exceptions might be.

The DSI Scientific Network supports multilateral benefit-sharing approaches and indigenous peoples and local communities as significant beneficiaries of DSI benefit-sharing.

## CAUTION

**A hybrid option indicates parties are working towards compromise, but many uncertainties and key challenges need to be clarified.**

- The current proposals do not provide clarity on when and how a user will determine whether multilateral or bilateral mechanisms apply. Furthermore, there is a risk of complex, bureaucratic tracking and tracing in order to document if one or multiple countries' DSI was used along the value chain.
- The Network supports "country tags" on DSI (geographical information in databases and scientific literature) as it increases transparency and integrity. However, this information should be reported in the existing infrastructure (e.g., publication or patent disclosure) and not part of a new, highly complex tracking and tracing system.

We note that payment for access to DSI (option 3.1) prevents open access thereby harming scientists in developing countries. Furthermore, it breaks interoperability between thousands of interconnected DSI databases.

## STOP

**Bilateral options (0, 1, 2.1) are incompatible with the scientific DSI ecosystem, where billions of sequences are used by millions of researchers around the world:**

- Bilateral negotiations will hinder scientific research if users must contact the provider country for hundreds or thousands of individual DSI. In practice, DSI users work with the global dataset and not just a few sequences from one country. Significant administrative problems are anticipated.
- Implementation and enforcement of bilateral options requires tracking and tracing systems to determine how DSI was being utilized and by whom. This will be cost- and time-intensive and not future-proof.
- Researchers will avoid regulated DSI and favor non-regulated DSI, resulting in jurisdiction shopping.

**Option 5, no benefit-sharing from DSI, is not a solution:**

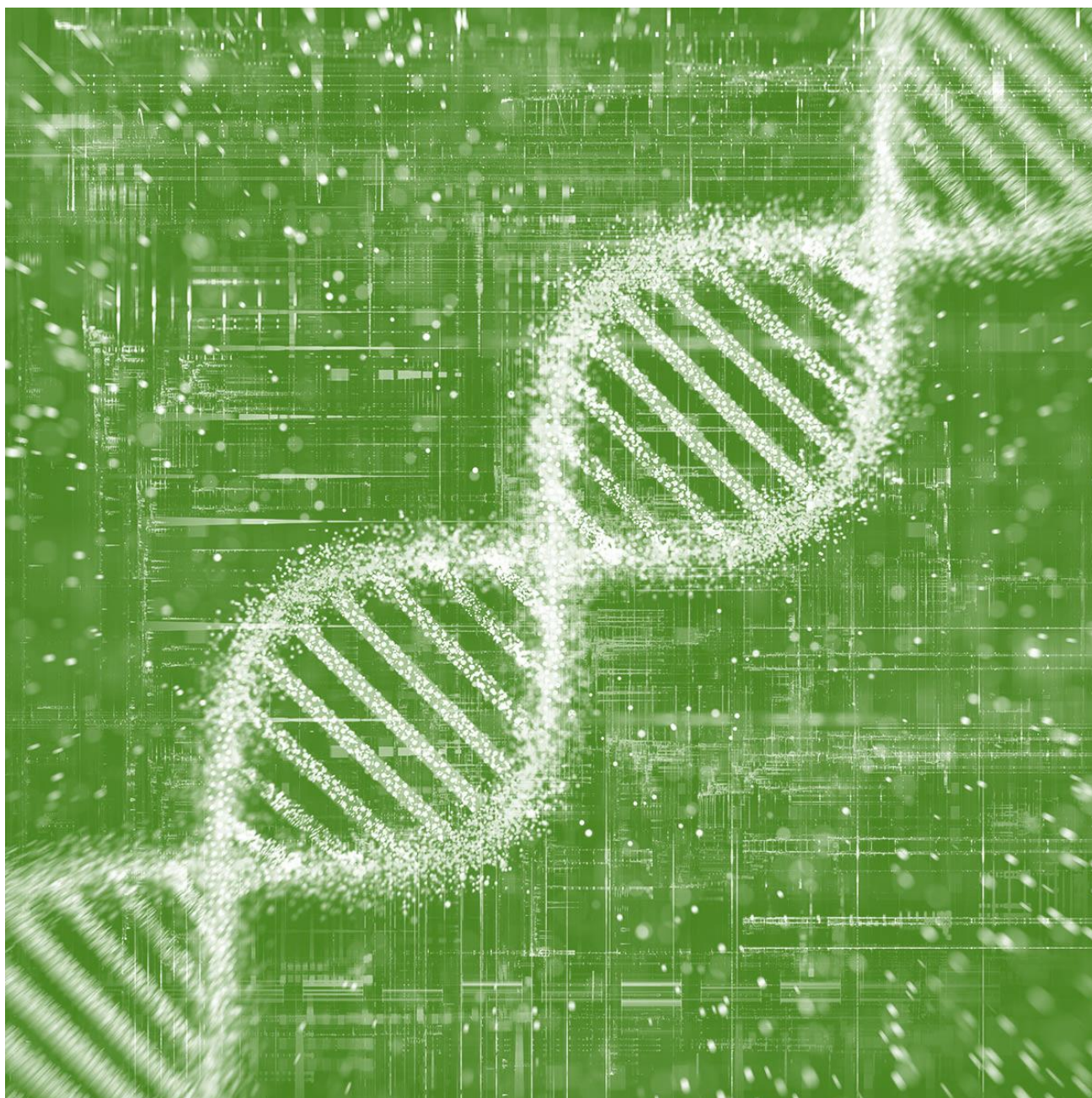
- Blocking benefit-sharing from DSI at the international level will create significant mistrust and lead to further national-level DSI legislation which leads to bilateral challenges described above.
- Option 5 achieves neither biodiversity nor benefit-sharing policy goals and is not compatible with other international fora discussions on DSI.
- Countries are also likely to be reluctant to grant access to genetic resources and support open access DSI. ABS regulations that prevent publication of DSI in open databases hinder conservation and research.



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The DSI Scientific Network was created in 2020 to help give the research community a voice in ongoing international policy discussions on digital sequence information (DSI). The Network's mission is to contribute to policymakers' and other stakeholders' understanding of DSI, its applications and its contributions to research, biodiversity conservation and public health. The Network brings together experts in their individual capacity, from more than 15 countries and from diverse economic backgrounds and DSI research contexts. Find more about the network at [www.dsiscientificnetwork.org](http://www.dsiscientificnetwork.org)

A working group of members completed the performance matrix prepared by the DSI Informal Advisory Group (CBD/WG2020/3/4/Add1). The matrix enables Parties and stakeholders to analyze the proposed DSI policy options. Given recent discussions at OEWG3 and OEWG4, we also included a new "hybrid" column in the matrix according to CBD/WG2020/3/INF/8 paragraph 40. For visual simplicity, we chose a "traffic light" (red, yellow, green) evaluation system. **Based on our matrix discussions and results, the DSI Scientific Network recommends parties avoid red options, proceed with deliberative caution in yellow areas, and pursue opportunities for win-win compromise in the green areas.**



## Performance matrix to analyze DSI policy options for benefit-sharing



### Key for Options:

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|---|---|
| <ul style="list-style-type: none"> <li>0 – Status Quo</li> <li>1 – DSI treated as genetic resources</li> <li>2.1 – DSI treated as genetic resources</li> <li>2.2 – Global mutually agreed terms (MAT)</li> <li>3.1 – Payment for access to DSI</li> </ul> | <ul style="list-style-type: none"> <li>3.2 – Other payments and contributions</li> <li>4 – Enhanced technical and scientific capacity</li> <li>5 – No benefit sharing from DSI</li> <li>6 – 1% levy on retail sales of genetic resources</li> </ul> |
|---|---|

Criteria and sub-criteria	Options									Hybrid Option
	0	1	2.1	2.2	3.1	3.2	4	5	6	
<b>A. Effective in achieving policy goals</b>										
1. Potential to deliver predictable monetary benefits	Red	Red	Red	Red	Green	Green	Red	Red	Green	Red
2. Potential to deliver predictable non-monetary benefits	Red	Red	Red	Yellow	Red	Yellow	Green	Red	Green	Yellow
3. Access to public databases remains open	Yellow	Red	Red	Yellow	Red	Green	Green	Green	Green	Yellow
4. Does not hinder research and innovation	Red	Red	Red	Yellow	Red	Green	Green	Green	Green	Red
5. Potential to contribute to the conservation and sustainable use of biodiversity	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Yellow
<b>B. Efficient and feasible to implement</b>										
6. Technically feasible	Yellow	Red	Red	Yellow	Yellow	Green	Green	Green	Green	Yellow
7. Legally feasible	Green	Yellow	Green	Green	Yellow	Yellow	Green	Green	Yellow	Yellow
8. Legally clear and certain to implement	Red	Red	Red	Yellow	Yellow	Yellow	Green	Red	Yellow	Red
9. Administratively simple	Red	Red	Red	Yellow	Green	Yellow	Green	Green	Green	Red
10. Implementable in an efficient and timely manner	Green	Red	Red	Red	Green	Yellow	Yellow	Green	Yellow	Red
11. Enables distinction between commercial and non-commercial use of DSI	Red	Red	Green	Green	Yellow	Yellow	Yellow	Red	Green	Yellow
12. Costs of set up and implementation are clear or easy to estimate	Yellow	Red	Red	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow
<b>C. Enables good governance</b>										
13. Easy to understand by providers and users	Red	Red	Red	Green	Green	Yellow	Green	Green	Green	Yellow
14. Easily enforceable by providers	Red	Red	Red	Yellow	Yellow	Yellow	Red	Green	Yellow	Yellow
15. Ease of compliance for users	Red	Red	Red	Yellow	Red	Yellow	Green	Green	Green	Red
16. Does not result in jurisdiction shopping	Red	Red	Red	Yellow	Green	Green	Green	Green	Green	Yellow
17. Facilitates the sharing of benefits with indigenous peoples and local communities	Red	Red	Red	Green	Green	Green	Green	Red	Green	Yellow
<b>D. Coherent and adaptable</b>										
18. Coherence with other forums considering DSI	Red	Red	Red	Green	Green	Green	Green	Red	Green	Yellow
19. Agile and adaptable to future technological and scientific development	Red	Red	Red	Green	Green	Green	Green	Red	Green	Yellow





## The DSI Scientific Network made the following assumptions and observations during its analysis:

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- **Option 0: Status Quo.** Countries will increasingly include DSI in their national ABS regulations (bilateral) and develop national or regional tracking and tracing systems. It will be difficult and expensive to implement and distrust and acrimony across the ABS field will increase.
- **Option 3.2: Other payments and contributions.** It is difficult to analyze this option if several approaches are included as was the case in the CBD document introducing the options. Therefore, the Network analyzed Option 3.2 under the assumption this system will be similar to a cloud-based (or freeware) approach.
- **Option 4: Enhanced technical and scientific capacity and cooperation** is not an obligatory option and would not have enforcement requirements for either providers or users.
- **Option 5: No benefit-sharing from DSI,** sub-criteria related to efficiency and feasibility to implement and enabling good governance would be green not because this option makes a good approach on it, but because this option implies that additional mechanisms for benefit-sharing won't be needed nor implemented.
- **Option 6: 1% levy on retail sales of genetic resources** was analyzed under the assumption that the multilateral system will be the rule and the bilateral procedures the exception or a small minority. If many bilateral exceptions were accepted by Parties, this option would become yellow or red in many criteria.
- **Hybrid option:** Characteristics of hybrid option remain unclear. The Network analyzed the hybrid option according to the description in CBD/WG2020/3/INF/8 paragraph 40.
- **Meaning of the colour red:** The color red was used both to indicate significant problems as well as a lack of relevance. Assuming the criteria and sub-criteria across the matrix are desired outcomes then both a "significant problem" as well as "irrelevant" have similar outcomes in that the criteria will not be served.
- **Sub-criteria 16:** The CBD document CBD/WG2020/3/4/Add1 vary on page 10 and 11 on whether there is a "not" in the jurisdiction shopping question. We chose to leave the "not" in the text so that the outcomes are consistent between rows. In other words, we assume jurisdiction shopping is not a desirable characteristic and thus parties do not wish to deliberately create a system that results in it.

