



IUCN BBNJ Policy Brief

# Digital Sequence Information (DSI) as a Means of Financing Under the BBNJ Agreement

February 2025



Leibniz Institute  
DSMZ-German Collection  
of Microorganisms  
and Cell Cultures GmbH



Government Offices of Sweden

## **About IUCN**

IUCN is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together.

Created in 1948, IUCN is now the world's largest and most diverse environmental network, harnessing the knowledge, resources and reach of more than 1,400 Member organisations and around 16,000 experts. It is a leading provider of conservation data, assessments and analysis. Its broad membership enables IUCN to fill the role of incubator and trusted repository of best practices, tools and international standards.

IUCN provides a neutral space in which diverse stakeholders including governments, NGOs, scientists, businesses, local communities, Indigenous Peoples' Organisations and others can work together to forge and implement solutions to environmental challenges and achieve sustainable development.

Working with many partners and supporters, IUCN implements a large and diverse portfolio of conservation projects worldwide. Combining the latest science with the traditional knowledge of local communities, these projects work to reverse habitat loss, restore ecosystems and improve people's well-being.

[www.iucn.org](http://www.iucn.org)

# DSI in the Context of the BBNJ Agreement

## *Introduction*

The ocean, with its immense biodiversity, holds vast potential for addressing global challenges ranging from healthcare to sustainable development. However, this biodiversity, particularly in areas beyond national jurisdiction (ABNJ), is under increasing threat from overexploitation, pollution, and climate change. The recently adopted BBNJ (Biodiversity Beyond National Jurisdiction) Agreement emphasizes the conservation and sustainable use of marine genetic resources (MGR) and highlights the critical role of Digital Sequence Information (DSI).

Marine genetic resources and their associated DSI are essential for conserving biodiversity and advancing research and innovation across diverse industries, including biotechnology, medicine, and environmental science. A fair and equitable benefit-sharing mechanism is vital to ensure that all nations, particularly developing countries, can participate in and benefit from these advancements. The BBNJ Agreement introduced a Special Fund to facilitate monetary benefit sharing, paving the way for sustainable financing mechanisms aligned with international priorities.

This policy brief seeks to provide guidance and insights from the Convention on Biological Diversity (CBD)'s experience with DSI, particularly the lessons learned from the recent 16th meeting of the Conference of the Parties (COP16) in Cali, to inform and shape the implementation of the BBNJ's financial mechanism.

## *What is DSI in the context of ABNJ?*

Digital Sequence Information (DSI) refers broadly to data derived from the genetic material of organisms, including nucleotide sequences (deoxyribonucleic acid (DNA) and ribonucleic acid (RNA)) and potentially other data types to be determined. Although the BBNJ Agreement does not provide a formal definition of DSI, Article 15.5 encourages collaboration with existing instruments to harmonize benefit-sharing practices and establish best practices for data governance. Despite the current small size of the ABNJ DSI dataset (0.06% of the global biodiversity DSI dataset), there is significant potential for expanding its value through cooperation with other frameworks such as the CBD, Food and Agriculture Organization (FAO), and World Health Organization (WHO).

The BBNJ Agreement is the first United Nations (UN) instrument to constructively address DSI in the context of ABNJ, aiming to foster transparency, equitable benefit-sharing, and innovation. Marine biodiversity, particularly in microbial and less-studied organisms, offers unique opportunities for developing pharmaceuticals, enzymes, and biotechnology products.

## The Cali Fund - Modalities for operationalizing the new DSI multilateral benefit sharing mechanism

On November 2, 2024, parties agreed on the modalities for operationalizing the new DSI multilateral benefit-sharing mechanism under the CBD in Decision 16/2. The mechanism covers DSI that is publicly available and for which the sharing of benefits is not provided for by other international ABS agreements. It will collect contributions from commercial users based on incentives that parties should voluntarily establish through administrative, policy or legislative measures.

Monetary benefit-sharing payments are based on a sectoral approach that focuses on commercial users. For-profit entities in sectors, such as pharmaceutical or agricultural biotech, that directly or indirectly benefit from the DSI covered by this scope should contribute 1% of their profits or 0.1% of their revenue to the global fund if they exceed two of the following three financial thresholds: total assets of \$20 million, sales of \$50 million, or profits of \$5 million.

The Cali Fund, will be established under the Multi-Partner Trust Fund and it is expected that users will be able to pay directly into the fund. At least fifty percent of the fund is dedicated towards indigenous people and local communities and will be distributed both by direct allocations as well as on a project basis. The COP16 decision is focused on initially creating obligations for large companies and will consider, at future CBD meetings and under the guidance of a new Steering Committee, medium and small companies as well as a more precise formula for distribution of the fund in the coming years.

Public databases, academic institutions, and public research organization are exempted from making payments because they generate non-monetary benefits through their use of DSI in the form of open data, open databases, open-source software, and open publications. Non-monetary benefits have significant costs and are essential to maintain the scientific infrastructure that allows open access to DSI globally.

Throughout Decision 16/2 reference is made to “other international ABS instruments” and a clear signal of collaboration is sent from CBD to other DSI-regulating instruments, including the BBNJ Agreement. For example, in para. 27 of the Annex, CBD Parties note the need to avoid stacking of obligations and streamlining processes.

A. Scholz (2025)

## How is DSI covered Under the BBNJ Agreement?

The BBNJ Agreement seeks to establish a Clearing-House Mechanism (CHM) to manage information on MGR and DSI, ensuring transparency and standardization through BBNJ identifiers. Users must notify the CHM within a certain period and provide updates on the availability and downstream use of DSI. The Agreement outlines both monetary and non-monetary benefit-sharing provisions:

- **Monetary Benefit Sharing:** Developed State parties will contribute annually to a Special Fund, based on 50% of their assessed budget contributions on an interim basis. Future modalities may also include milestone payments, commercialization-related payments, and other mechanisms.
- **Non-Monetary Benefit Sharing:** This includes open access to -DSI and other scientific data, technology transfer, capacity building, and cooperation with developing nations. These provisions aim to maximize equity and participation, particularly for the Global South.

## The MGR Context

The economic potential of MGR is vast, particularly for pharmaceuticals, biotechnology, and consumer products. It is, however, worth noting that the provisions of the MGR section do not apply to fishing/fish and other living marine resources derived from fishing unless fish are used for research and development purposes. Further, to date, most MGR-derived innovations have originated within national jurisdictions, but ABNJ potential offers additional opportunities owing to its extraordinary rich biodiversity and novel ecosystems. Because BBNJ DSI is a small fraction of global DSI, it is likely that nearly all BBNJ-DSI commercial outcomes will also have used DSI from CBD (i.e.. National jurisdictions). Because of the high costs associated with MGR collection in ABNJ, strong economic incentives would be needed. By aligning the regulatory landscape across several UN instruments (e.g. BBNJ and CBD), the BBNJ Agreement and its benefit-sharing mechanisms can be strengthened.

# DSI in the Context of the CBD

At COP16, the CBD operationalized a multilateral benefit-sharing mechanism for DSI under [Decision 16/2](#). Key provisions include:

- **Monetary contributions:** Commercial users in specific sectors contribute 1% of profits or 0.1% of revenue to the **Cali Fund for the Fair and Equitable Sharing of Benefits from the Use of Digital Sequence Information on Genetic Resources (the Cali Fund)** if they exceed financial thresholds. The fund prioritizes indigenous peoples and local communities who should receive at least 50% of the fund to be allocated to IPLCs and other providers through direct and project-based support.
- **Exemptions:** Public databases, academic institutions, and non-commercial entities are exempt, recognizing their role in providing and maintaining open access to DSI.

- **Collaboration** with other instruments: The decision emphasizes coordination with other Access and Benefit-sharing (ABS) mechanisms, including the BBNJ Agreement, to streamline processes and ensure legal certainty for users.

BBNJ is also invited to coordinate non-monetary benefit sharing via a clearinghouse mechanism to facilitate scientific matchmaking and capacity building opportunities.

***The Cali Fund represents a significant step toward equitable benefit-sharing while safeguarding open access to DSI essential for scientific progress and biodiversity conservation.***

## Access and Benefit Sharing: The BBNJ Special Fund

The BBNJ finance mechanism, anchored in Article 52, introduces a Special Fund supported by mandatory and voluntary contributions.

Key priorities for operationalizing the fund include:

- Establishment of appropriate institutional mechanisms such as the Access and Benefit-Sharing Committee and the Finance Committee as foreseen in the Agreement.
- Establishing predictable, accessible financial resources for developing countries including non-coastal States countries.

- Aligning DSI payments under Article 14 with the broader objectives of the BBNJ Agreement.
- Leveraging synergies with the Cali Fund and other international funding and financing mechanisms to avoid duplication and maximize efficiency.

***The design of the BBNJ Special Fund presents an opportunity to contribute to a comprehensive ocean finance architecture, incorporating innovative mechanisms to support biodiversity conservation at scale.***

The period since the establishment of the Preparatory Commission<sup>1</sup> until the first BBNJ Conference of the Parties (BBNJ COP1) could therefore be used to analyse how DSI payments under Art.14 will help to ensure such provision of adequate, accessible, new, additional and predictable financial resources. The Preparatory Commission may also want to consider whether and how interactions with the Cali Fund could be considered and appropriately initiated. While both the BBNJ Agreement and Decision 16/2 encourage close coordination, because of their different legal nature (binding vs non-binding) and divergent approaches on the role of States in fostering implementation,

harmonizing the two frameworks would require careful consideration to ensure the whole is greater than the sum of its parts.

The BBNJ COP will be relying upon a finance committee of appropriate expertise to make recommendations on the identification and mobilization of funds under the mechanism. It shall also collect information and report on funding under other mechanisms and instruments contributing directly or indirectly to the achievement of the objectives of this Agreement. It remains to be discussed which entity would be best suited to act as host of the Special Fund.

## BBNJ COP1 Consideration

The Conference of the Parties shall, according to Art 52:11, determine an initial resource mobilization goal through 2030 for the special fund from all sources, taking into account, inter alia, the institutional modalities of the special fund and the information provided through the capacity-building and transfer of marine technology committee.

It would therefore be desirable to consider how best a wide range of mandatory and voluntary payments, including those from industry for DSI, MGR and through other forms could best be integrated to deliver the required outcome; adequate, accessible, new and additional and predictable financial resources.

This aligns directly with Art 52:8 which states that financial resources mobilized in support of the implementation of this Agreement may include funding provided through public and private sources, both national and international, including, but not limited to, contributions from States, international financial institutions, existing funding mechanisms under global and regional instruments, donor agencies, intergovernmental organizations, non-governmental organizations and natural and juridical persons, and through public-private partnerships.

Not only can appropriate design help to avoid duplications, identify funding gaps and facilitate efficiencies for the operation of the financial mechanism within the Agreement and in connection with related other conventions. It can also be a way to engage more broadly in designing a One Ocean finance architecture that can help to support the conservation of biodiversity in ABNJs at scale, using, where appropriate, innovative finance mechanisms to address some of the initial capital expenditure aspects needed to deliver rapid implementation at scale.

*T. Thiele (2025)*

---

<sup>1</sup> <https://documents.un.org/doc/undoc/gen/n24/117/55/pdf/n2411755.pdf?%20token=31avfpFH4uRQRMi17g&fe=true>  
Para 13 on Annex CBD/COP/16/L.32/Rev.1  
Para 3 of Annex CBD/COP/16/L.32/Rev.1  
Para 9 of Annex CBD/COP/16/L.32/Rev.1

# IUCN Recommendations

- 1. Alignment between Multilateral Environmental Agreements (MEAs)**  
**Processes:** Foster coordination between the CBD and BBNJ to harmonize financial mechanisms and ensure legal and scientific clarity for users.
- 2. Focus on BBNJ objectives:** Prioritize the delivery of tangible biodiversity benefits, including capacity building, transfer of marine technology and equitable benefit-sharing.
- 3. Develop recommendations for COP1:** Advance detailed proposals for the operationalization of the Special Fund.
- 4. Encourage Ratification:** Engage Parties to sign and ratify the BBNJ Agreement and actively participate in preparatory discussions.
- 5. Communicate Benefits:** Highlight the value of the BBNJ Agreement for biodiversity conservation, scientific and economic development, particularly for developing nations.

## Key Messages for Policy-Makers

- Align MEA processes and financial mechanisms for coherence and efficiency.
- Strengthen linkages between the CBD and BBNJ to enhance benefit-sharing.
- Emphasize the delivery of biodiversity benefits and the importance of ratification.
- Showcase the economic and ecological potential of MGR and DSI from ABNJ.

## What next?

- Initiate discussions around the BBNJ Special Fund mechanism ahead of PrepCom.
- Foster understanding and engagement among nations, particularly in the developing countries, LDCs, SIDs including non-coastal states to support ratification and implementation of the BBNJ Agreement for the benefit of all.
- Build momentum for an integrated One Ocean finance framework that drives biodiversity conservation and sustainable use.

## Resources:

<https://www.nature.com/articles/s41467-024-52994-z>  
<https://doi.org/10.1038/s41586-024-07891-2>  
<https://doi.org/10.1038/s41893-020-0522-9>  
<https://doi.org/10.1039/D0NP00067A>  
<https://highseasalliance.org/wp-content/uploads/2024/05/Deep-Dives-finance-.docx.pdf>  
<https://documents.un.org/doc/undoc/gen/n24/114/28/pdf/n2411428.pdf>  
<https://documents.un.org/doc/undoc/gen/n24/117/55/pdf/n2411755.pdf>  
[https://www.dsiscientificnetwork.org/wp-content/uploads/2024/12/DSI-Database-landscape\\_WEB.pdf](https://www.dsiscientificnetwork.org/wp-content/uploads/2024/12/DSI-Database-landscape_WEB.pdf)  
<https://www.nature.com/articles/s41467-022-28594-0>  
<https://www.nature.com/articles/s41467-024-52994-z>  
<https://doi.org/10.5281/zenodo.14196245>

For enquiries, please contact  
[ocean@iucn.org](mailto:ocean@iucn.org)

---

## Affiliations

### Minna Epps

Global Ocean Director, IUCN Centre for Conservation Action

### Torsten Thiele

Global Ocean Trust

### Amber Scholz

Head of Science Policy & Internationalization Department,  
Leibniz Institute DSMZ

### Marcel Jaspars

Marine Biodiscovery Centre, University of Aberdeen,  
Old Aberdeen, Scotland, UK.

Independent reviewer: **Daniel Kachelriess**

Design and layout: **Imre Sebestyén** / Unit Graphics

**Citation:** Epps, M. Thiele, T.Scholz, A. Jaspars, M., 2025.  
*Digital Sequence Information (DSI) as a Means of Financing under  
the United Nations Convention on the Law of the Sea on the  
conservation and sustainable use of marine biological diversity of  
areas beyond national jurisdiction (BBNJ)*, Gland, Switzerland, IUCN  
Headquarters: IUCN. 8 pages



**INTERNATIONAL UNION  
FOR CONSERVATION OF NATURE**

Rue Mauverney 28  
1196 Gland  
Switzerland  
Tel +41 22 999 0000  
Fax +41 22 999 0002  
[www.iucn.org](http://www.iucn.org)

