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- Side Event -

Use of DSI and benefit-sharing: technical and scientific aspects

Third Session of the Open-Ended Working Group on the
Post 2020 Global Biodiversity Framework
Geneva, 21st March 2022

The ABS Initiative is funded by



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- Side Event - DSI – what is it? How is it related to the CBD objectives?

Third Session of the Open-Ended Working Group on the
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ABS Capacity Development Initiative

Geneva, 21st March 2022

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DSI Simply Explained

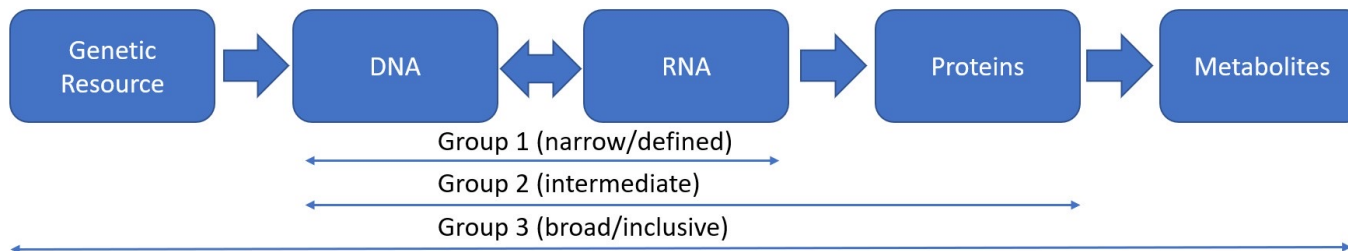
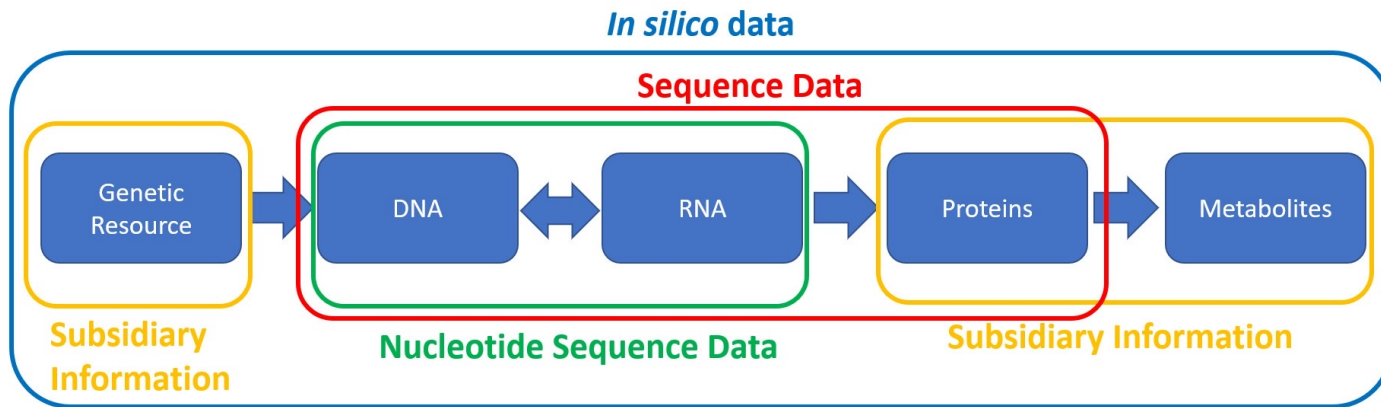
Points of Departure



- Digital sequence information on genetic resources (DSI): The increasing speed and falling costs of sequencing DNA and other macromolecules resulted in an enormous quantity of sequence data being produced and stored in open accessible databanks, which are used for research and development, including for commercial purposes.
- In the absence of international benefit-sharing obligations, many Parties of the CBD are concerned that the use of DSI might replace the use of genetic resources and will negatively impact on the third objective of the CBD and the objective of the Nagoya Protocol.
- The term DSI was first introduced into CBD discussions on synthetic biology and does not have an internationally agreed legal definition.
- Parties and expert meetings are still struggling with clarifying scope and definitions of a future DSI regime.

What is DSI?

Outcome of AHTEG on DSI





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- Side Event - DSI within the formal process of the CBD

**Third Session of the Open-Ended Working Group on the
Post 2020 Global Biodiversity Framework**

Co-Leads of the DSI Contact Group of the OEWG GBF

Geneva, 21st March 2022

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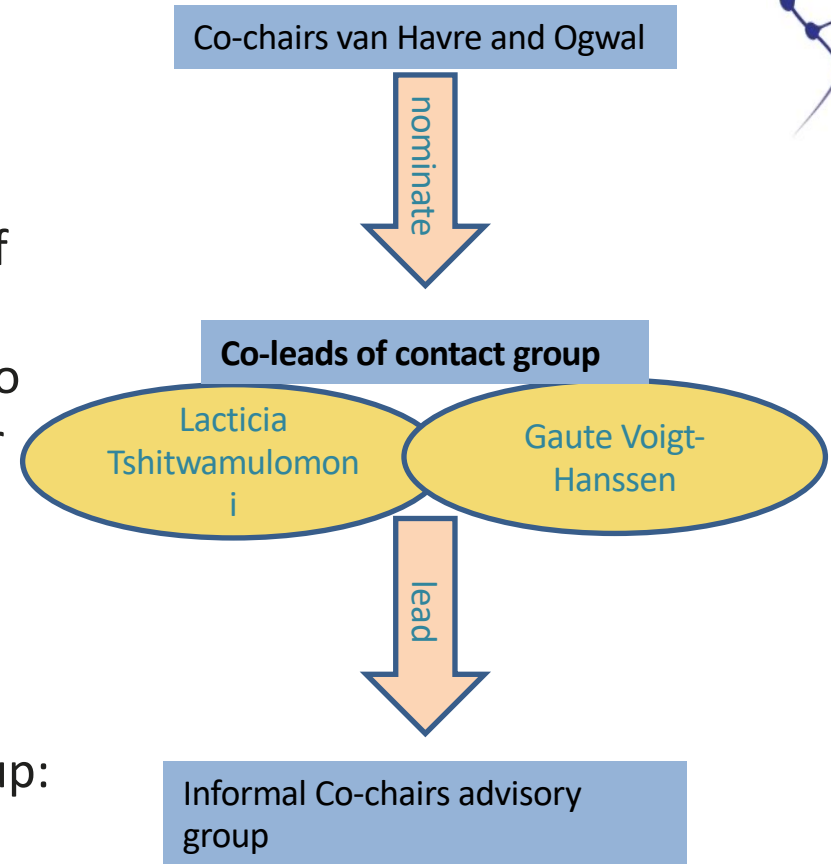
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Background

Status of DSI-related process

Where are we after virtual OEWG 3?

- During part one of the third meeting of the OEWG and post 2020 Global Biodiversity Framework (23rd August to 3rd September 2021) the **Co-Chairs** Mr Basil van Havre and Mr Francis Ogwal established an **informal Co-chairs advisory group** on digital sequence information (DSI) on genetic resources
- Led by the **co-leads** of the contact group: **Lacticia Tshitwamulomoni** (South Africa) and **Gaute Voigt-Hanssen** (Norway)



Background

Purpose of the advisory group

- The purpose of the group is to **provide advice and feedback** to the **Co-chairs** and the **Executive secretary** on DSI in preparation for the second part of the meeting of the OEWG that *was* planned to take place in January 2022 in Geneva – now March 2022



Background



The advisory group should consider

- the undertaking of an **assessment** or consequences, policy approaches, options and modalities for benefit-sharing arising from the utilization of DSI
- areas of **potential convergence** and areas of **divergence** based on the summary made by the co-leads
- **areas of additional work** on DSI that may be required in the period between the third meeting of the OEWG and COP15
- **existing and potential forthcoming** inputs such as studies, dialogues, views, etc. from formal and informal activities related to DSI

Organisation of the report



Section I: Introduction

- I A: Background
- I B: Organizational Matters

Section II: Outcomes of the Informal Co-chairs Advisory Group

- II A: Framework for the assessment of policy options related to the access and benefit-sharing in respect of digital sequence information on genetic resources
- II B: Co-leads' summary of the discussion on potential convergence and apparent divergence of the IAG

Section III: Co-leads' Conclusions and Recommendations from the Discussions of the IAG

- III A: Potential elements of recommendation
- III B: Areas for further consideration towards convergence
- III C: Mandate to advance work on the multi-criteria analysis and for continuing the IAG's work

Performance matrix



6. Performance matrix

Criteria and sub-criteria	Scoring 10=high-performing; 0=non-performing; 1=low-performing; N/A=do not know /not applicable. OR pass/fail	Option 0	Option 1	Option 2		Option 3		Option 4	Option 5	Option 6
		Status Quo	DSI treated as GR	Countr y MAT	Global MAT	Payment for access to DSI	Other contributi ons	Enhanced TSC and CB	No benefit sharing from DSI	1% levy on retail sales of GR
A. Effective in achieving policy goals										
1. Potential to deliver predictable monetary benefits										
2. Potential to deliver predictable non-monetary benefits										
3. Access to public databases remains open										
4. Does not hinder research and innovation										
5. Potential to contribute to the conservation and sustainable use of biodiversity										
B. Efficient and feasible to implement										
6. Technically feasible										
7. Legally feasible										
8. Legally clear and certain to implement										
9. Administratively simple										
10. Implementable in an efficient and timely manner										
11. Enables distinction between commercial and non-commercial use of DSI										
12. Cost of set-up and implementation										
C. Enables good governance										
13. Easy to understand by providers and users										
14. Easily enforceable by providers										
15. Ease of compliance for users										
16. Does result in jurisdiction shopping										
17. Facilitates the sharing of benefits with IPLCs										
D. Coherent and adaptable										
18. Coherence with other forums considering DSI										
19. Agile and adaptable to future technological and scientific development										

From: CBD/WG2020/3/INF/8, 18 November 2021. *Co-leads' Report on the Work of the Informal Co-chairs' Advisory Group on Digital Sequence Information on Genetic Resources*

Co-leads' summary – elements of discussion



Report stating areas of potential convergence / divergence

1. Fair and equitable benefit-sharing
2. Open access of DSI in public databases
3. Role of indigenous peoples and local communities, and traditional knowledge
4. Capacity-building
5. Linkages between access and benefit-sharing
6. Legal clarity and certainty
7. Consistency with existing laws, decisions and other forums
8. Traceability
9. Importance to the Convention on Biological Diversity and the Sustainable Development Goals
10. Importance of DSI in research and conservation
11. Future proofing
13. Terminology
14. Cost-benefit
15. Other important criteria: *simplicity, technical and legal feasibility; timing re GBF; pathogens;*

Co-leads' conclusions

Recommendations

- Any **benefits** from the use of **genetic resources** should be shared in a **fair and equitable way**, and **solutions should be found** on how to share benefit arising from the **use of DSI**;
- **Access** to DSI in public databases **remains open**;
- **Indigenous peoples and local communities** are stewards of biodiversity and their role and rights should be **taken into account** in addressing DSI;
- **Capacity-building** is an integral part of the solution on DSI.

Areas for further consideration towards convergence

- explore potential **modalities** will help to elucidate further common understanding on what fair and equitable benefit-sharing would entail in practical terms in this context;
- characterize the **monetary and non-monetary benefits** that could be shared through a solution on DSI;
- modalities to consider **indigenous peoples and local communities** in a solution on DSI;
- **timetable** for implementing a solution on DSI
- **special cases**, such as health emergencies, and their implications for the solution,





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- Side Event -

Use of DSI and Benefit-Sharing: Technical and Scientific Aspects

**Third Session of the Open-Ended Working Group on the
Post 2020 Global Biodiversity Framework**

Hartmut Meyer, ABS Capacity Development Initiative

Geneva, 21st March 2022

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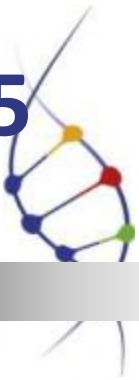
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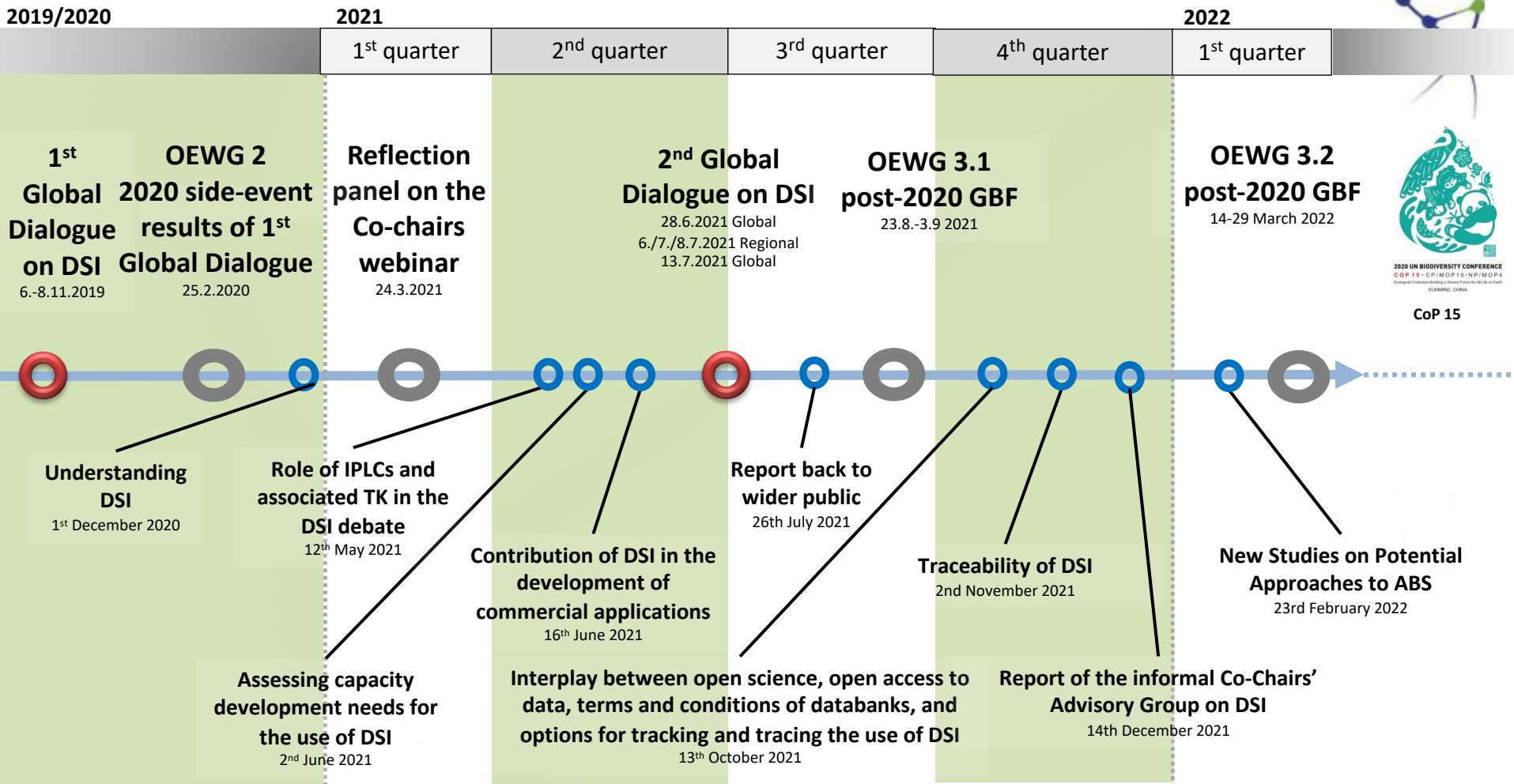


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Informal DSI support process up to COP 15



CoP 15



legend:



DSI Global Dialogue
(on invitation)



OEWG



Series of technical
webinars on DSI
(public)

1st Global Dialogue on DSI: 5 Policy Options



1st Global Dialogue on DSI: Criteria for their assessment



<i>Deliverables</i>	<i>Governance aspects</i>
<ul style="list-style-type: none"> • Contribution to fight biodiversity loss • Win-win-win gains (providers – users – environment) • Potential to generate benefits (monetary and non-monetary) • Ability to minimize biopiracy 	<ul style="list-style-type: none"> • Fairness and equity • Legal certainty / predictability • Transparency • Ability to build trust among partners/stakeholders.
<i>Operational aspects</i>	<i>Economic aspects</i>
<ul style="list-style-type: none"> • Feasible and effective • Simplicity of the system • Flexibility / Adaptability 	<ul style="list-style-type: none"> • Cost of setting up and maintaining the system • Transaction costs
<i>Potential impacts</i>	<i>Capacity</i>
<ul style="list-style-type: none"> • Impact on R&D • Not disruptive to open access • No impediments to research 	<ul style="list-style-type: none"> • Capacity development for the use of DSI (level playing field) • Ability to use DSI globally
	<ul style="list-style-type: none"> • ... and many other aspects

2nd Global Dialogue on DSI



Key messages

- Use of DSI results in non-monetary and monetary benefits, incl. through commercial products
- Benefit-sharing needs to reach biodiversity custodians, including IPLCs
- Open, but not necessarily free access to DSI needs to be maintained
- Metadata on country of origin and IPLC/TK tags should be included
- Capacity development and financial support to close the skill and technology gap between countries is part of the solution

Convergence



- A **robust benefit-sharing system** is needed
- More **capacity development** is needed
- **Legal certainty** for all stakeholders is important
- Fundamental need for **more funds**, resources, capacity directed towards **conservation and sustainable use**
- Importance of **communication and awareness-raising campaigns** on how benefit-sharing and DSI contributes to conservation and sustainable use

levelling the playing field between the developed and developing countries

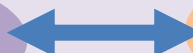
Divergence



“The reason for the divergence is tension from the providers to have a consent process, and on the user side for administrative ease so that we don’t hamper R&D”

A multilateral mechanism would be more appropriate for DSI in accessed from databases

Multilateral system



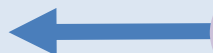
Bilateral system

Bilateral benefit-sharing in cases where the source is clearly identifiable
Bilateral approach is the default for access to GR for generation of DSI

We need an open discussion on whether we need a T&T system for a multilateral mechanism to operate effectively

„There could be an IPLC label, not just TK labels

Track & Trace



If one were to decouple access and benefit-sharing, open access becomes less of an issue.

There’s also no clear delimitation between academic and commercial users

DSI opportunity: multilateral, de-coupled, leapfrog



Research Locations, DSI Accessions & Patents in The Bahamas



Hybrid Approach

**Nagoya
FPIC & MAT**

**New genetic
materials
acquired from
Indigenous
territories or
collections
form these
lands under
Nagoya**

**Triggers
following
access**

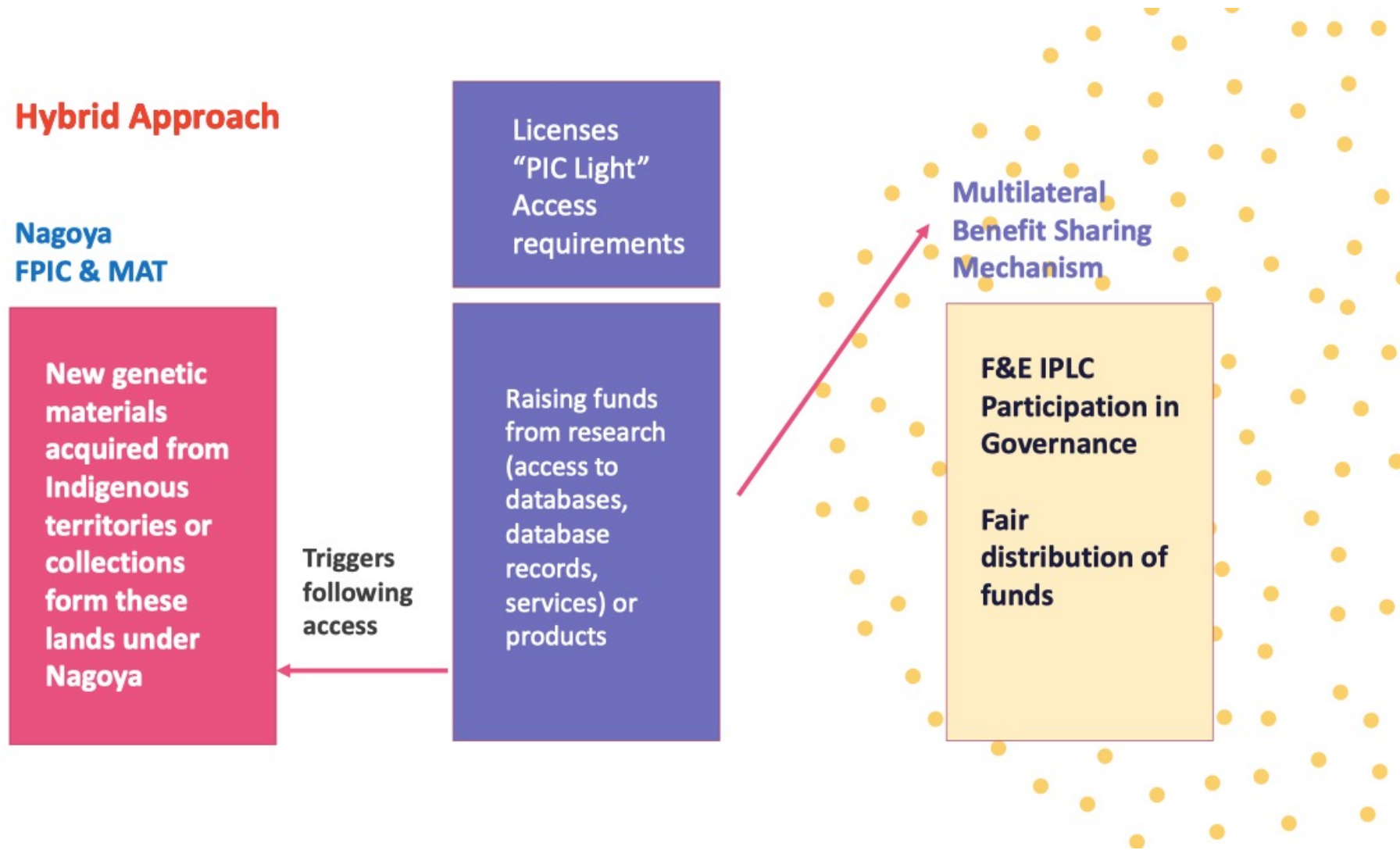
**Licenses
“PIC Light”
Access
requirements**

**Raising funds
from research
(access to
databases,
database
records,
services) or
products**

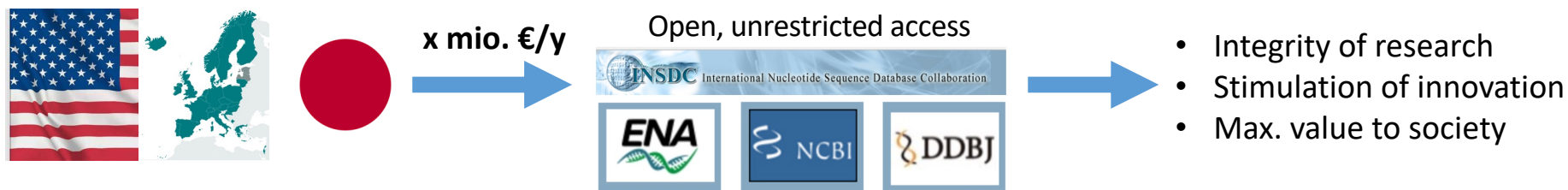
**Multilateral
Benefit Sharing
Mechanism**

**F&E IPLC
Participation in
Governance**

**Fair
distribution of
funds**



- Leading principles:
- Proper framing is key
 - Clarity and coherence about what should be achieved, why and how



What is the (real) problem?	What are potential solutions?	Implications?
A clear need for <u>additional</u> benefit sharing on the use of sequence data	Policy options currently discussed for BS on the use of DSI	 <ul style="list-style-type: none"> • On top of current bilateral approach for GRs → more complexity, potentially higher legal uncertainty • No ABS improvements for GRs!
Unequal capacity to use sequence data (and GRs) Limitations in current ABS set-up for GRs ...	<ul style="list-style-type: none"> • Fundamental review & redesign of BS • Policy options currently in discussion can be further developed to address BS and capacity development needs in general 	One solution for value creation/BS on the use of biodiversity, satisfying key criteria for success: <ul style="list-style-type: none"> • Effectiveness in meeting expectations • Simplicity and workability • Legal certainty

The road to COP 15

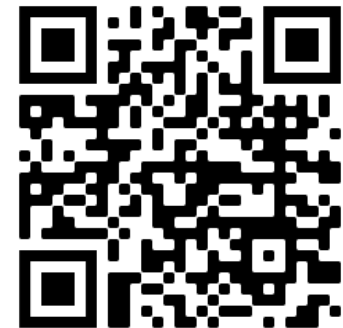


Next steps?

Further Webinars and Global Dialogues on DSI
COP 15 in Kunming

Please register for ABS Newsletter and invitations for
webinars at abs-initiative@giz.de

Further reading about past events or upcoming events
<https://www.abs-biotrade.info/event-reports/>





Thank you!

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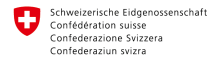
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