



# Digital Sequence Information: an introduction

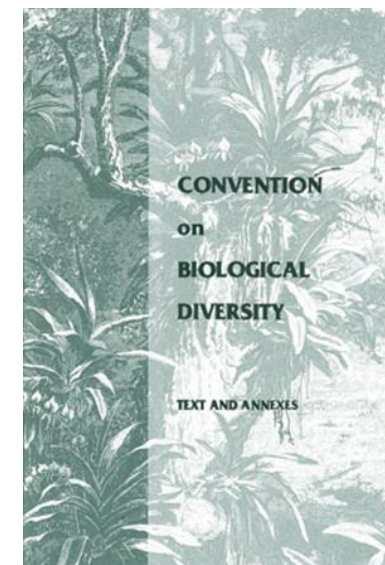
Dr Hendrik Segers

National Focal Point to the Convention on Biological Diversity

OD Nature, Royal Belgian Institute of Natural Sciences

# The UN Convention on Biological Diversity

- “aka” CBD
- A multilateral, **legally-binding** convention
- Result of the Earth Summit, Rio de Janeiro, 1992
- One of three “Rio Conventions” (CBD, UNFCCC, UNCCD)
- One of seven biodiversity-related conventions (CBD, CITES, CMS, IPPC, ITPGRFA, RAMSAR, WHC)
- Present: **196** Parties, incl. EU (most recent: Andorra)



## 3 mutually supportive OBJECTIVES

**The conservation  
of biological  
diversity**

**The fair and  
equitable  
sharing of the  
benefits arising  
out of the  
utilization of  
genetic  
resources (GR)**



**The sustainable use of the  
components of biological diversity**

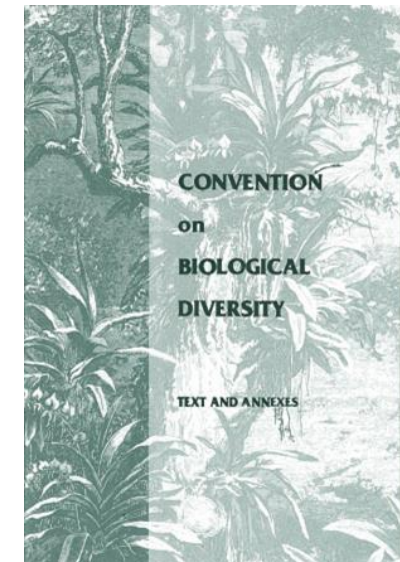
The UN  
Convention  
on Biological  
Diversity

# The UN Convention on Biological Diversity

## Art 15 of CBD

- Recognizes **sovereign right of states** over their natural resources
- Requests Parties to facilitate access to genetic resources (GR) and associated traditional knowledge (TK) based on **mutually agreed terms (MAT)** and subject to **prior informed consent (PIC)**
- Requests Parties to take ... measures ... with the aim of **sharing** in a fair and equitable way the results of research and development and **the benefits arising from the commercial and other utilization of genetic resources** with the Contracting Party providing such resources.

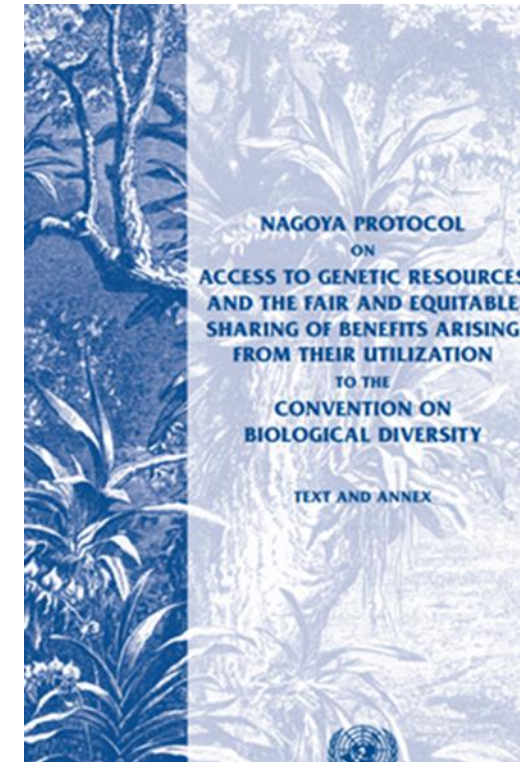
(1992)



# Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity

*CBD COP X, Nagoya, Japan, 2010*

- ✓ Objective: “the Fair and Equitable Sharing of the Benefits Arising from the Utilization of Genetic Resources”
- ✓ Entry into force: **12 October 2014**



# European regulation and implementing regulation

Aim: ensuring user compliance to provider country legislation, in accordance with the NP, for users within the EU

to be implemented by EU MS

(EU Guidance: non-binding)



# Belgian national and regional law

Focus on:

**Access (NP):** competence based on territoriality

⇒ marine within territorial sea = Federal competence

**Monitoring of compliance and sanctions (EU)**

⇒ Regional competence: BXL, FL, WAL

Work ongoing...



# Issues with the Nagoya Protocol ...

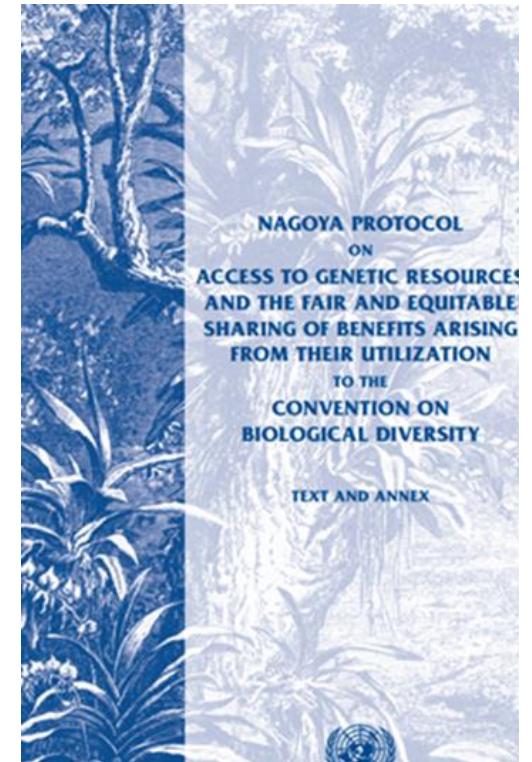
- Developments in science (*synthetic biology*)

## Definitions:

"*Genetic resources*": genetic material of actual or potential value

"*Genetic material*": any **material** of plant, animal, microbial or other origin containing functional units of heredity

- Is based on a **bilateral approach** (but see Art. 10)
- Does not affect other existing international agreements, or development and implementation of "specialized access and benefit-sharing agreements"



# CBD COP 13 Cancun (Mexico), 2016

“DSI” issue raised



**CBD**



## Convention on Biological Diversity

Distr.  
GENERAL

CBD/COP/DEC/XIII/16  
16 December 2016

ORIGINAL: ENGLISH

CONFERENCE OF THE PARTIES TO THE  
CONVENTION ON BIOLOGICAL DIVERSITY  
Thirteenth meeting  
Cancun, Mexico, 4-17 December 2016  
Agenda item 17

### DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

#### XIII/16. Digital sequence information on genetic resources

*The Conference of the Parties,*

*Noting* that digital sequence information<sup>1</sup> on genetic resources is a cross-cutting issue that may concern the three objectives of the Convention on Biological Diversity,

*Noting* rapid advances arising from research and development in biotechnology regarding the use of digital sequence information on genetic resources and therefore *recognizing* the importance of addressing this matter in the framework of the Convention in a timely manner,

*Recognizing also* the need for a coordinated and non-duplicative approach on this matter under the Convention and the Nagoya Protocol,

1. **Decides to consider** at its fourteenth meeting any potential implications of the use of digital sequence information on genetic resources for the three objectives of the Convention;

NP COP MOP 2  
Cancun (Mexico),  
2016

“DSI” issue raised



CBD



Convention on  
Biological Diversity

Distr.  
GENERAL

CBD/NP/MOP/DEC/2/14  
16 December 2016

ORIGINAL: ENGLISH

CONFERENCE OF THE PARTIES TO THE CONVENTION ON  
BIOLOGICAL DIVERSITY SERVING AS THE MEETING OF  
THE PARTIES TO THE NAGOYA PROTOCOL ON ACCESS  
TO GENETIC RESOURCES AND THE FAIR AND  
EQUITABLE SHARING OF BENEFITS ARISING FROM  
THEIR UTILIZATION

Second meeting  
Agenda item 14

**DECISION ADOPTED BY THE PARTIES TO THE NAGOYA PROTOCOL ON ACCESS AND  
BENEFIT-SHARING**

**2/14. Digital sequence information on genetic resources**

*The Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol,*

*Noting that digital sequence information<sup>1</sup> on genetic resources is a cross-cutting issue that may concern the objective of the Nagoya Protocol,*

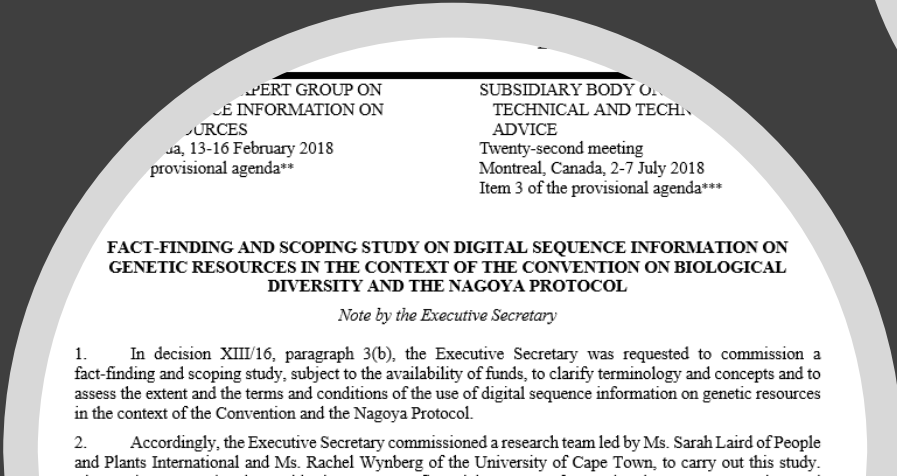
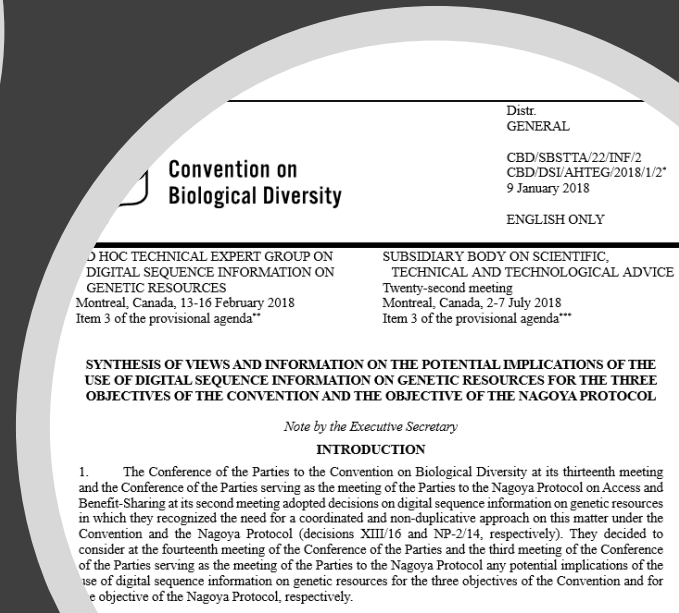
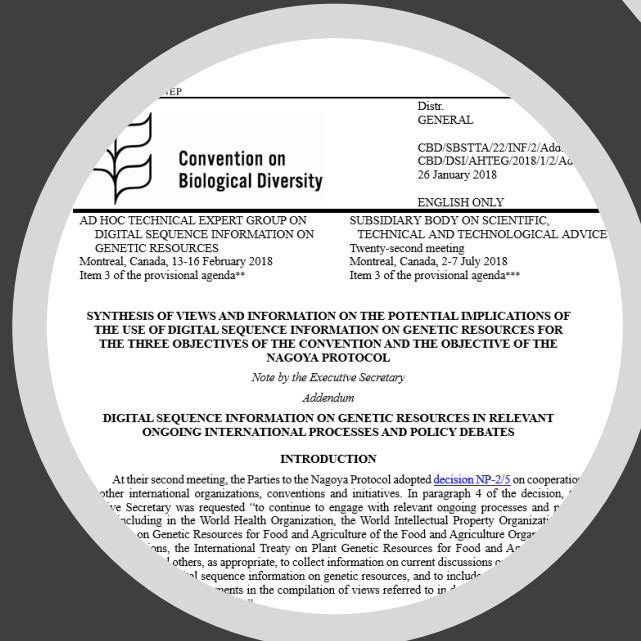
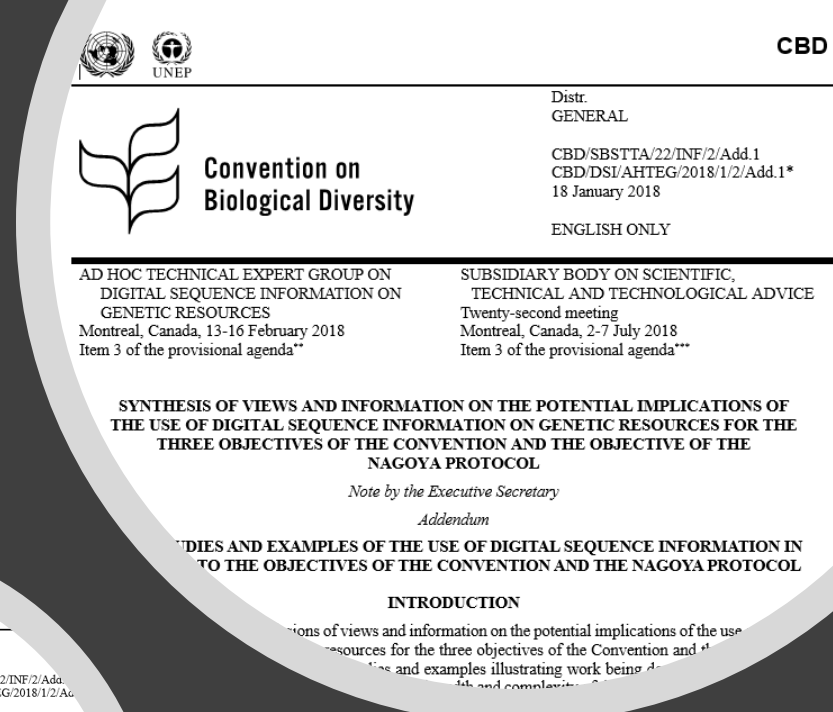
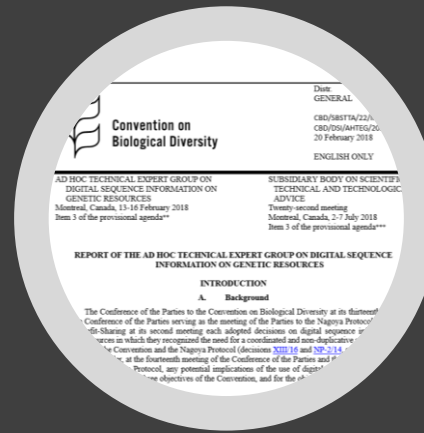
*Also noting rapid advances arising from research and development in biotechnology regarding the use of digital sequence information on genetic resources and therefore recognizing the importance of addressing this matter within the framework of the Nagoya Protocol in a timely manner,*

*Recognizing the need for a coordinated and non-duplicative approach on this matter under the Convention and the Nagoya Protocol and acknowledging decision XIII/16,*

1. **Decides to consider** at its third meeting any potential implications of the use of digital sequence information on genetic resources for the objective of the Nagoya Protocol;

# SBSTTA-22

Considered outcome of work of an AHTEG on commissioned studies and compilation of submitted views by governments, stakeholders, IPLCs, ...



# CBD COP 14 Sharm El-Sheikh (Egypt) 2018

“DSI” issue further discussed



CBD



## Convention on Biological Diversity

Distr.  
GENERAL

CBD/COP/DEC/14/20  
30 November 2018

ORIGINAL: ENGLISH

CONFERENCE OF THE PARTIES TO THE  
CONVENTION ON BIOLOGICAL DIVERSITY  
Fourteenth meeting  
Sharm El-Sheikh, Egypt, 17-29 November 2018  
Agenda item 18

### DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

#### 14/20. Digital sequence information on genetic resources

*The Conference of the Parties,*

*Mindful of the three objectives of the Convention,*

*Recalling Articles 12, 15, 16, 17 and 18 of the Convention,*

*Mindful of the increasing generation and use of digital sequence information on genetic resources, its publication in both public and private databases and advances in data analytics,*

*Noting that the term “digital sequence information” may not be the most appropriate term and that it is used as a placeholder until an alternative term is agreed,*

→ *Recognizing the importance of new technologies for the current and future utilization of genetic resources, and noting that the media in which information is stored and shared is continuously evolving,*

→ *Considering that the post-2020 global biodiversity framework will provide guidance on the long-term strategic directions to the 2050 Vision for Biodiversity,*

## CBD COP 14 Sharm El-Sheikh (Egypt) 2018

“DSI” issue further discussed

8. *Decides to establish* a science- and policy-based process on digital sequence information on genetic resources as set out in paragraphs 9 to 12 below;

9. *Invites Parties,* other Governments, indigenous peoples and local communities, relevant stakeholders and organizations to submit their views and information:

➔ (a) To clarify the concept, including relevant terminology and scope, of digital sequence information on genetic resources and if and how domestic measures on access and benefit-sharing consider digital sequence information on genetic resources;

➔ (b) On benefit-sharing arrangements from commercial and non-commercial use of digital sequence information on genetic resources;

10. *Invites Parties,* other Governments and indigenous peoples and local communities to submit information on their capacity-building needs regarding the access, use, generation and analysis of digital sequence information on genetic resources, in particular for the three objectives of the Convention;

11. *Decides* to establish an extended Ad Hoc Technical Expert Group,<sup>1</sup> including the participation of indigenous peoples and local communities, and *requests* the Executive Secretary, subject to the availability of resources:

NP COP MOP 3 Sharm  
El-Sheikh (Egypt)  
2018

“DSI” issue further discussed



CBD



Convention on  
Biological Diversity

Distr.  
GENERAL

CBD/NP/MOP/DEC/3/12  
30 November 2018

ORIGINAL: ENGLISH

CONFERENCE OF THE PARTIES TO THE CONVENTION  
ON BIOLOGICAL DIVERSITY SERVING AS THE  
MEETING OF THE PARTIES TO THE NAGOYA  
PROTOCOL ON ACCESS TO GENETIC RESOURCES  
AND THE FAIR AND EQUITABLE SHARING OF  
BENEFITS ARISING FROM THEIR UTILIZATION

Third meeting

Sharm El-Sheikh, Egypt, 17-29 November 2018

Agenda item 17

**DECISION ADOPTED BY THE PARTIES TO THE NAGOYA PROTOCOL ON ACCESS AND  
BENEFIT-SHARING**

**3/12. Digital sequence information on genetic resources**

*The Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol on Access and Benefit-sharing,*

*Mindful of the objective of the Nagoya Protocol,*

*Recalling Article 5.1, 8, 20, 22, 23 of the Nagoya Protocol,*

1. *Welcomes* decision 14/34 and decision on 14/20 of the Conference of the Parties to the Convention;
2. *Recognizes* that the Open-ended Intersessional Working Group on the Post-2020 Global Biodiversity Framework will consider the outcomes of the deliberations of the Ad Hoc Technical Expert Group referred to in paragraph 11 of decision 14/20 of the Conference of the Parties;
3. *Requests* the Open-ended Working Group to submit the outcome of its deliberations for consideration by the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol at its fourth meeting.

## Intersessional work:

- Invitation to submit views and commissioned studies
- Establishment of an AHTEG
- OEWG on post 2020

<https://www.cbd.int/doc/notifications/2019/ntf-2019-012-abs-en.pdf>



Ref.: SCBD/NPU/DC/VN/KG/RKi/87804

5 February 2019

### NOTIFICATION

#### Digital Sequence Information on Genetic Resources: Submission of views and information and call for expression of interest to undertake studies

Madam/Sir,

The fourteenth meeting of the Conference of the Parties to the Convention on Biological Diversity and the third meeting of the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol on Access and Benefit-Sharing each adopted decisions on digital sequence information on genetic resources (decisions 14/20 and NP-3/12, respectively).

[Decision 14/20](#) established a science and policy-based process on digital sequence information on genetic resources. The process entails the submission of views and information, the commissioning and peer review of four studies, work by an ad hoc technical expert group (AHTEG), consideration of the outcomes of the AHTEG by the open-ended inter-sessional working group established under decision 14/34 to support the preparation of the post-2020 global biodiversity framework, and recommendations by the open-ended inter-sessional working group to the Conference of the Parties at its fifteenth meeting on how to address digital sequence information on genetic resources in the context of the post-2020 global biodiversity framework. [Decision NP-3/12](#) also requested the open-ended inter-sessional working group to submit the outcome of its deliberations for consideration by the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol at its fourth meeting.

The table below presents a tentative timeline for the implementation of these activities.

Date	Activity
February 2019	Invitation for the submission of views and information pursuant to decision 14/20, paragraphs 9 and 10 (see below)
May-December 2019	Studies requested in decision 14/20, paragraph 11(b)-(e) (see below)
June 2019	Invitation to nominate experts for the extended AHTEG
1 June 2019	Deadline for the submission of views and information
September/October 2019	Peer review of the commissioned studies mentioned above
February/March 2020	Meeting of the AHTEG
July 2020 (tbc)	Meeting of the open-ended inter-sessional working group on the post-2020 global biodiversity framework

DSI is not only a  
CBD issue...



# FAO: ITPGRFA

- Invitation to submit views and other information on “Digital sequence information” for the Eighth Session of the Governing Body of the ITPGRFA (11-16 November 2019)



Food and Agriculture  
Organization of the  
United Nations



**The International Treaty**  
ON PLANT GENETIC RESOURCES  
FOR FOOD AND AGRICULTURE

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Viale delle Terme di Caracalla, 00153 Rome, Italy    Mail: [pgrfa-treaty@fao.org](mailto:pgrfa-treaty@fao.org)    <http://www.fao.org/plant-treaty>    Telephone: +39 0657055430

Our Ref.: NCP GB8-016 MYPoW/DSI

Rome, 3 December 2018

## **NOTIFICATION**

**Invitation to submit views and other information on “Digital sequence information”**  
(Deadline: 31 March 2019)

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# WHO: PIP framework

- Discussion during WHA 72, May 2019



World Health  
Organization

EXECUTIVE BOARD  
144th session  
Agenda item 6.1

EB144(6)  
31 January 2019

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## **Pandemic Influenza Preparedness Framework for the sharing of influenza viruses and access to vaccines and other benefits**

The Executive Board, having considered the report contained in document EB144/23 on implementation of decision WHA71(11) (2018)<sup>1</sup> decided to recommend to the Seventy-second World Health Assembly the consideration of the following decision:

# UNCLOS

Intergovernmental Conference on an international legally binding instrument 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

2<sup>nd</sup> and 3<sup>rd</sup> session, 25 March-5 April 2019 and 19-30 August 2019

United Nations

A/CONF.232/2019/1\*



**General Assembly**

Distr.: General  
3 December 2018

Original: English

**Intergovernmental Conference on an international  
legally binding instrument 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**

**Second session**

New York, 25 March–5 April 2019

# Goal of this meeting

- Provide information on the process
- Collect information and view to clarify the concept and on options for Benefit Sharing
- Contribute to the development of a Belgian position on DSI

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NATUUR & BOS



Biodiversity.be



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**V L I R** Vlaamse  
Interuniversitaire Raad