

# Life sciences & ABS, the policy of microbial collections

Philippe Desmeth  
BCCM International Cooperation Manager  
WFCC Past President 2010-2017  
TRUST Coordinator

GREAT AT SMALL THINGS



# OUTLINE

**Incorporate legal obligations into daily work**

**Role of Collections in R&D**

**Legal & Regulatory Data Management**

**Pragmatic, proactive approach**

# OUTLINE

**Incorporate legal obligations into daily work**

## **Role of Collections in R&D**

Legal & Regulatory Data Management

Pragmatic, proactive approach

Biological Material

Data

GREAT AT SMALL THINGS



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ATGAGAGGCT ATCCAGCCCT CAGGTTAGA TCCAGAAAG GGAACATCG
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1981 TATATTTCA AACTGCTG APTGATGCA AACTCAACTC APTGATGAT
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2221 CTAATCACT AAGATGCTC CTAATGCTC TAAATGCTC CTAATGCTC TCACTGAAA
    
```



HIV BLAST Results

Services

Link to alignment with this sequence, below

Download sequences  fasta  Align Select all or Unselect all

Download	Accession	Name	Subtype	Country	Year	Description	Score	E value	Identities	Location of match in genome
<input checked="" type="checkbox"/>	Z29236	I1035_1	B	NL	1987	HIV-1 DNA, V3 region (IV drug user I1035 seroconv. year 1987)	432	1e-120	272/272 (100%)	---
<input checked="" type="checkbox"/>	AY451046	P87x5_439	B	US	1987	HIV-1 isolate P87x5/439 from USA envelope protein (env) gene, partial sequence	407	1e-112	264/272 (97%)	---

# FIT FOR PURPOSE – FIT FOR USE SOLUTIONS

GREAT AT SMALL THINGS

Scientific & technical package

Legal & Administrative package



Biological Material



Data



Services + after sales



GENETIC RESOURCES, TRADITIONAL KNOWLEDGE & THE LAW



# Change of paradigm

From **free access** to **sovereign rights** (CBD article 15)

[...the authority to determine access...] (CBD article 15.1)

[...to create conditions to facilitate access...] CBD art. (15.2)





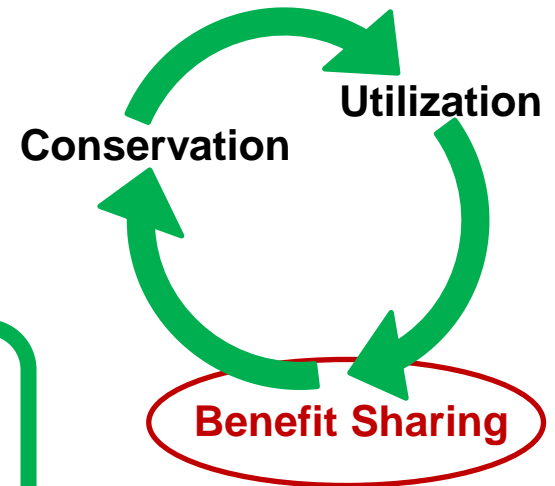
# Nagoya Protocol

**Objective: fair and equitable sharing of the benefits**  
(3<sup>rd</sup> objective of the CBD)

by *appropriate* **access to genetic resources**  
by appropriate transfer of relevant technologies  
by appropriate funding

thereby contributing to the

1. conservation of biological diversity
2. sustainable use of its components



# Upstream research and CBD Article 7

## Identification and Monitoring

Each Contracting Party shall,

- (a) **Identify** components of biological diversity [...]
- (b) **Monitor**, through sampling and other techniques, the components of biological diversity [...]
- (c) [...]
- (d) **Maintain and organize** [...] data derived from identification and monitoring activities [...].



# Collections and CBD Article 9

## Ex-situ Conservation

Each Contracting Party shall [...] :

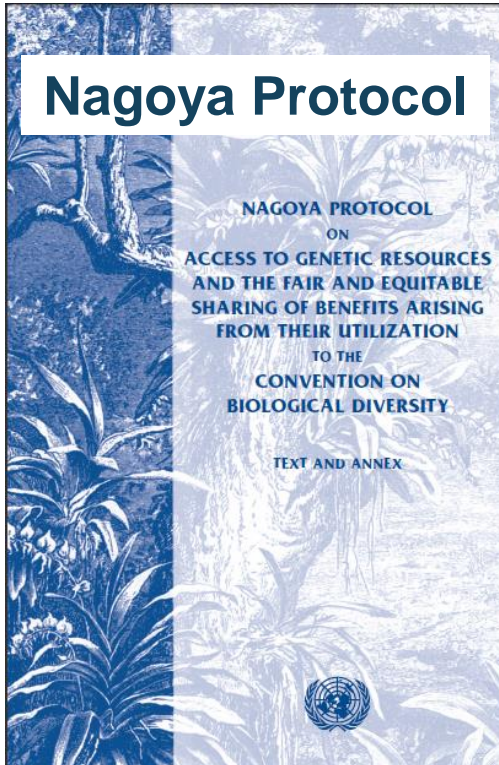
- (a) Adopt measures for the **ex-situ conservation** of components of biological diversity, preferably in the country of origin [...]
- (b) Establish and maintain **facilities for ex-situ conservation of and research** on plants, animals and micro-organisms, preferably in the country of origin of genetic resources;
- (d) Regulate and manage **collection of biological resources** from natural habitats for ex-situ conservation purposes [...]
- (e) Cooperate in providing financial and other support for **ex-situ conservation** [...]

# Nagoya Protocol

## ABS - Access and Benefit Sharing



Convention on  
Biological Diversity



or **Access** to Genetic Resources

*Quid pro Quo*

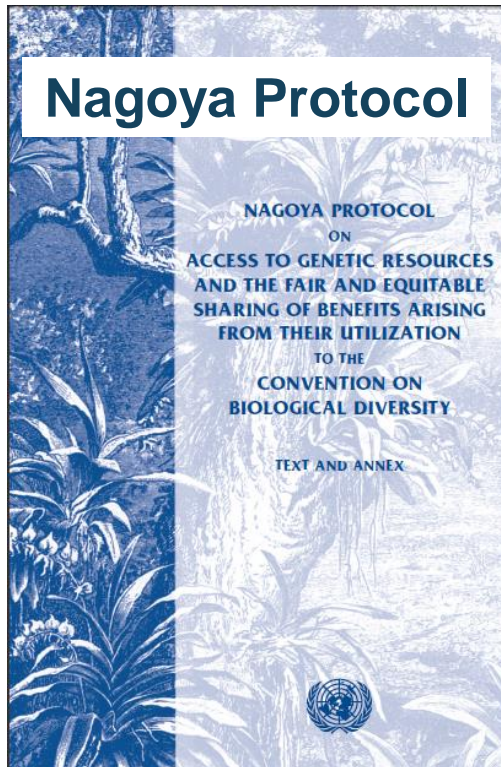
and the Fair and Equitable  
**Sharing of Benefits** Arising from their Utilization

# Nagoya Protocol

## Threat & Opportunity for Life Sciences



Convention on  
Biological Diversity



### Nagoya Protocol

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

TEXT AND ANNEX



on Access to Genetic Resources

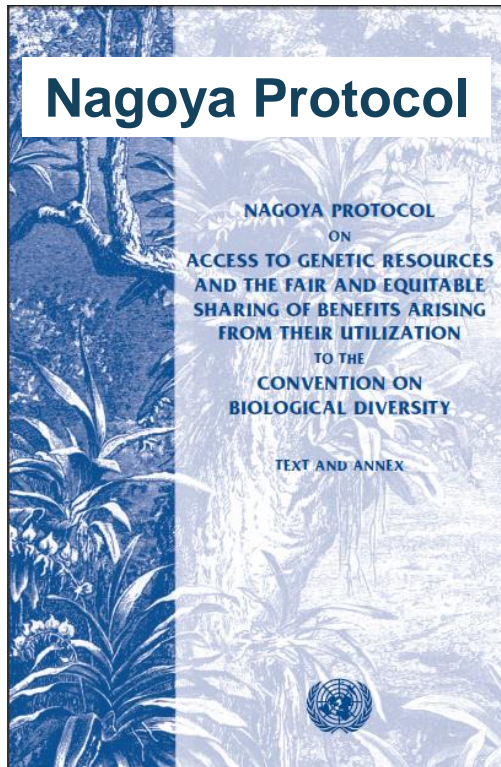
and the Fair and Equitable  
Sharing of Benefits Arising from their Utilization

# Nagoya Protocol

## Threat & Opportunity for Life Sciences



Convention on  
Biological Diversity



Restrictive/counterproductive rules

or **Access** to Genetic Resources

and the Fair and Equitable **Sharing of Benefits** Arising from their Utilization

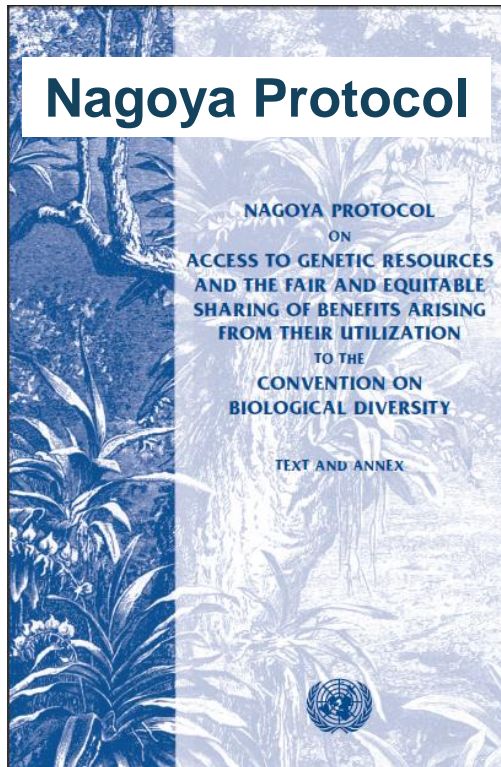
Too focused on monetary profit

# Nagoya Protocol Threat & **Opportunity** for Life Sciences



Convention on  
Biological Diversity

Streamlined access for better R & D



or **Access** to Genetic Resources

and the Fair and Equitable  
**Sharing of Benefits** Arising from their Utilization

Capacity building

# STAKEHOLDER'S DEMAND

## LEGAL CERTAINTY

Tangible/Intangible ownership, exploitable resources, IPR

## COST EFFICIENCY

Cost effective solution

## GLOBAL WORKING

Access to data, Reliable information

## INFORMATION MANAGEMENT

Interconnectivity, Confidentiality

# OUTLINE

**Incorporate legal obligations into daily work**

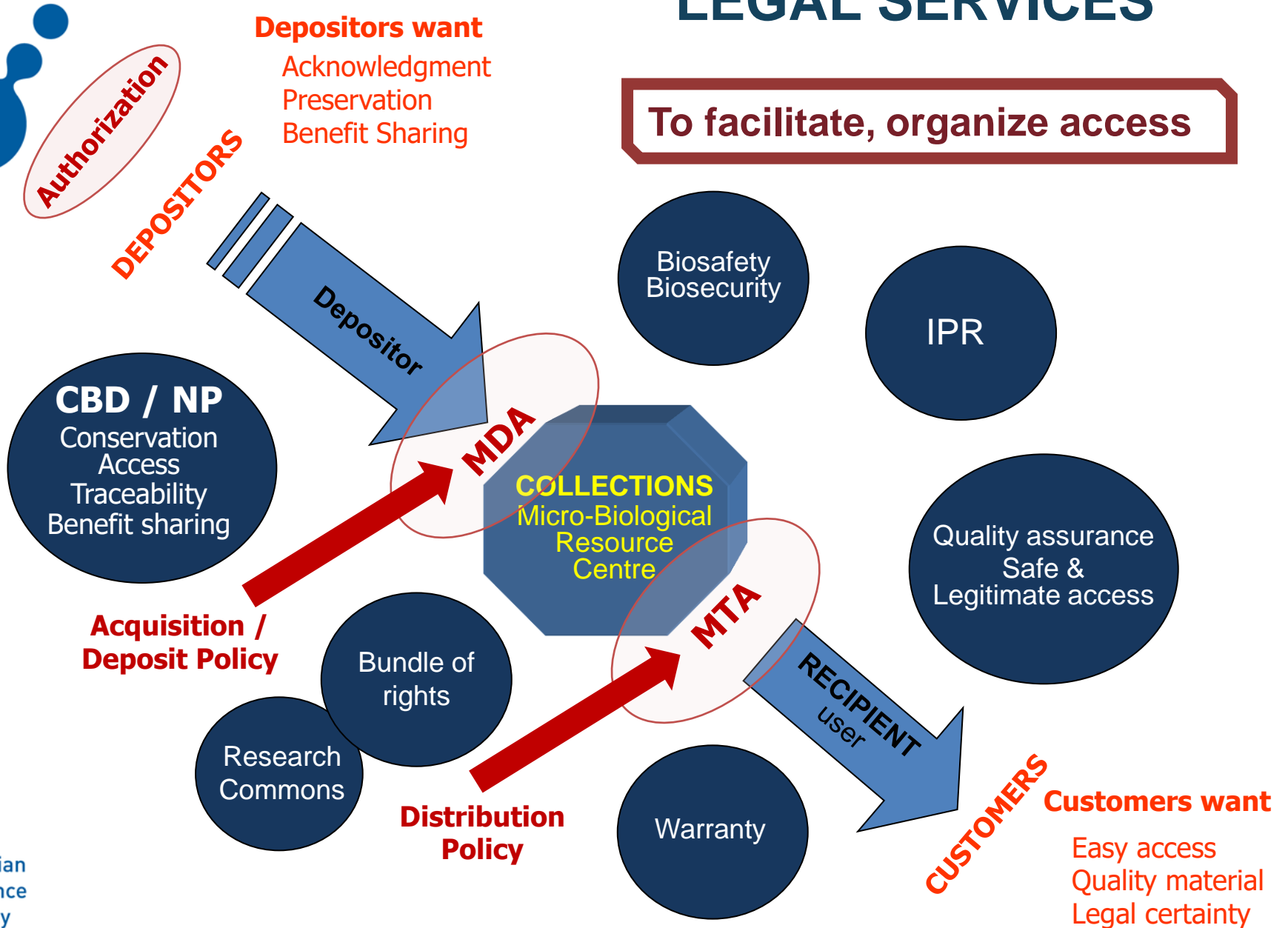
Role of Collections in R&D

**Legal & Regulatory Data Management**

Pragmatic, proactive approach

To facilitate, organize access

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# Minimum Data Set

=> Link source(s) to final outcome(s)

=> Data necessary to track Microbial Genetic Resources

**➔ Minimum Data Set (MDS)**

**WHAT  
WHEN  
WHERE**

**Scientific &  
Technical  
Linkage**

**FROM WHOM  
TO WHOM**

**Legal &  
Administrative  
Linkage**

# Minimum Data Set

=> Data necessary to track Microbial Genetic Resources

Strain number:	<a href="#">MUCL 54355</a> <a href="#">Add to cart</a>
Species name:	Phytophthora infestans (Montagne) de Bary
Organism type:	Filamentous
History:	V. César -> 2012, MUCL
Collector:	César Vincent, CRA-W Département Sciences du Vivant,
Isolator:	César Vincent, CRA-W Département Sciences du Vivant,
Conditions for growth:	MUCL medium V8 PDA 2 C
Original substrate:	Tomato
Origin:	Belgium, Hainaut, Leuze
Sexual state:	MTA2

**WHAT**

**WHEN**

**FROM WHOM**

**WHERE**

**Catalogue**

**Database & Laboratory Information Management System**

# FULL SERVICE

## Scientific & technical package

## Legal & Administrative package



Biological Material



Data



Services + after sales



GENETIC RESOURCES,  
TRADITIONAL KNOWLEDGE  
& THE LAW



# NO WAITING



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# OUTLINE

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# Operating Nagoya Protocol in Microbiology

MODEL CONTRACTUAL CLAUSES, CODES OF CONDUCT, GUIDELINES, BEST PRACTICES AND/OR STANDARD

**MOSAICC**




Micro-Organisms Sustainable use and Access regulation International Code of Conduct

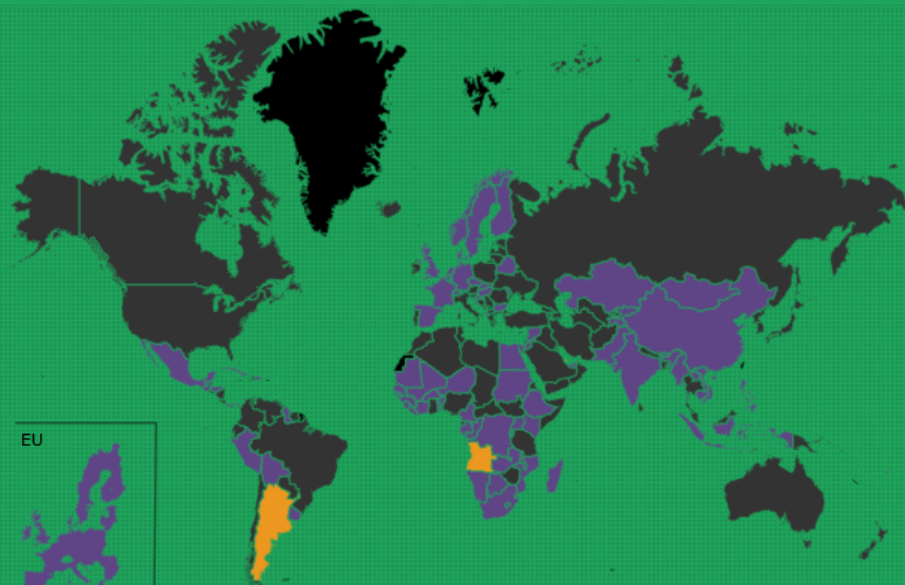

**TRUST**



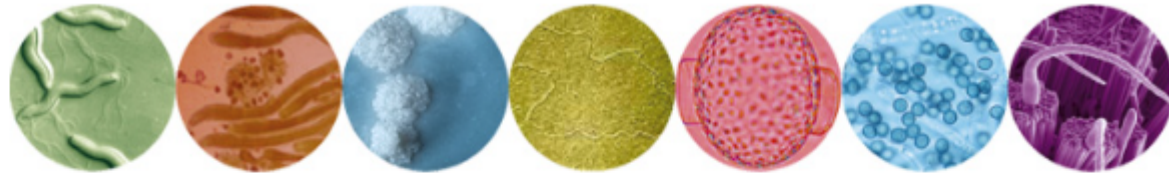
TRansparent User-friendly System of Transfer



The Access and Benefit-sharing Clearing-house (ABSCH) is a platform for exchanging information on ABS and a key tool for facilitating the implementation of the Nagoya Protocol. 

**91** Parties to the Nagoya Protocol**5** Ratified, not yet Party **107** Non-Parties

<https://absch.cbd.int/>



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## TRUST - TRansparent User-friendly System of Transfer, implementing the Nagoya Protocol in microbiology

TRUST aims at managing the incidence of the CBD and Nagoya Protocol on the scientific, technical and administrative activities of culture collections and, more generally, incorporating the Nagoya Protocol into the daily life of microbiologists.

- **TRUST guidelines March 2016 Version**
- **TRUST handbook March 2016 Version**

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<http://bccm.belspo.be/projects/trust>

# Complementary elements

- Optimal combination of material & data
  - => **Law(s) facilitating *ex situ* preservation** of key biological material
- Digital Sequence Information are in a multilateral scientific exchange system (GenBank, EMBL-EBI, DDBJ)
  - => Consolidation of **non monetary benefit-sharing systems**
- Derivatives
  - => Pace of scientific developments forces **to switch from static to dynamic model of law**  
e.g.: Bundle of rights, Microbial Commons





Thank you



**BCCM** GREAT AT SMALL THINGS

BELGIAN  
CO-ORDINATED  
COLLECTIONS OF  
MICRO-ORGANISMS

WICKO-OKOWI2W2

