

Access and Benefit-Sharing (ABS)

Martin Brink & Bob Kreiken

22 September 2025



Access and Benefit Sharing (ABS)

- What is Access and Benefit Sharing?
 - regulation of access to genetic resources and traditional knowledge associated with genetic resources
 - sharing of benefits from the use of these between providers and users
- What does it mean?
 - you cannot always freely take and utilise genetic resources anymore, but may need permission from a government
- What forms of benefit sharing exist?
 - monetary (e.g. royalties, up-front payments)
 - non-monetary (e.g. scientific co-operation, technology transfer)



ABS is relatively new



- Genetic resources were taken and exchanged freely for thousands of years
 - *genetic resources were considered 'common heritage of mankind'*
- Second half 20th century: increasing role of Intellectual Property Rights for market products based on genetic resources (e.g. in medicine, cosmetics, plant breeding)
 - *products based on genetic resources were not considered 'common heritage of mankind'*
- Recognition that many freely available genetic resources from developing countries were transformed in not-freely available market products in developed countries
 - *concept of Access and Benefit-Sharing (ABS) developed*

ABS Example South Africa



- Product
 - extract of kanna (*Sceletium tortosium*) used as a basis for an antidepressant (Zembrin)
- Partners
 - HGH Pharmaceuticals
 - South African San Council (SASC)
 - local communities
- Access
 - HGH gets permit for bioprospecting and export to conduct research and commercialize products
- Benefit-sharing
 - up-front payments and royalties for SASC and local communities
 - employment creation for local communities through cultivation of kanna

Why is Access and Benefit-Sharing (ABS) important for CGN?

- CGN has the role of National Focal Point on ABS
 - information supply to users in the Netherlands on how to comply with ABS obligations
 - information supply to foreign users on ABS rules in the Netherlands
 - through website, helpdesk, newsletter, presentations
- CGN provides policy support on ABS to the government of the Netherlands (e.g. in international negotiations)
- The genebank operations of CGN itself are also affected by ABS rules

Key ABS definitions



- ABS is about access to **genetic resources** and the sharing of benefits arising from their **utilisation**
 - what are **genetic resources**?
 - *any material of plant, animal, microbial or other origin containing functional units of heredity, that is of actual or potential value*
 - *except for human genetic resources*
 - what is **utilisation** of genetic resources?
 - *to conduct research and development on the genetic and/or biochemical composition of genetic resources, including through the application of biotechnology*



International ABS agreements



■ Existing

- Convention on Biological Diversity (CBD)
- Nagoya Protocol (in CBD)
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
- Pandemic Influenza Preparedness Framework for the sharing of influenza viruses and access to vaccines and other benefits (PIP Framework)
- Multilateral Mechanism for Digital Sequence Information (MLM)

■ *Future*

- *International instrument on the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (BBNJ Treaty or "Treaty of the High Seas")*
- *Pathogen Access and Benefit-Sharing System (PABS)*

Convention on Biological Diversity (CBD)



- Negotiated in UNEP (United Nations Environment Programme)
- In force since 29 December 1993
- 196 Parties
- Objectives
 1. conservation of biological diversity
 2. sustainable use of its components
 3. fair and equitable sharing of the benefits arising out of the utilization of genetic resources

Convention on Biological Diversity (CBD)

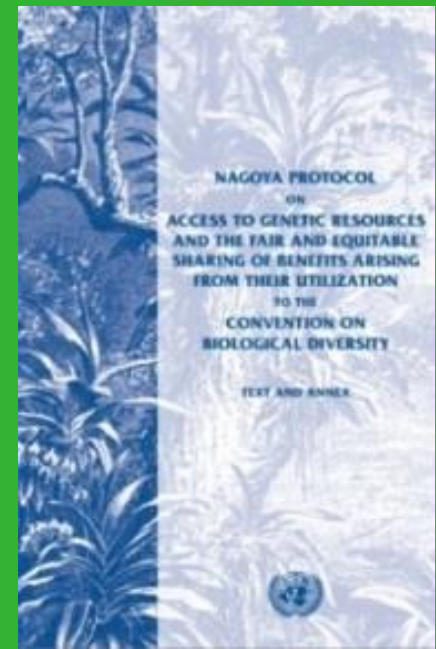


■ Important elements

- covers all genetic resources
 - *except human material*
- affirms that states have sovereign rights over their genetic resources
- access on the basis of bilateral negotiations between the provider country and the user (unless otherwise determined by that country)

Nagoya Protocol

- Negotiated in UNEP (United Nations Environment Programme)
- Part of (Protocol to) the Convention on Biological Diversity (CBD, 1993)
- In force since 12 October 2014
- Objective
 - *the fair and equitable sharing of the benefits arising from the utilization of genetic resources (...), thereby contributing to the conservation of biological diversity and the sustainable use of its components*
- 142 Parties (May 2025)



Nagoya Protocol



- Principles
 - Provider countries are to ensure clear and transparent procedures
 - compliance to ABS rules in provider countries is to be monitored by the countries where the genetic resources are utilized

- Access to genetic resources on the basis of
 - Prior Informed Consent (PIC): permission by authorities of the country providing genetic resources
 - *unless otherwise determined by that country*
 - Mutually Agreed Terms (MAT): contract with provider
 - *including benefit-sharing arrangements*

- Also provisions on traditional knowledge associated with genetic resources and derivatives

International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

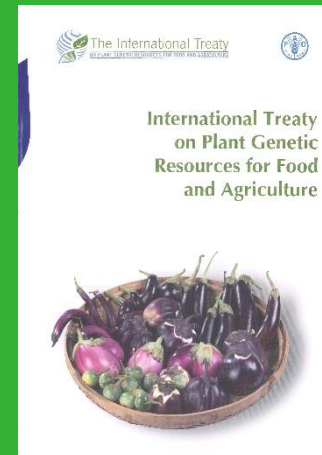


■ Scope

- Plant Genetic Resources for Food and Agriculture (PGRFA)
 - *any genetic material of plant origin of actual or potential value for food and agriculture*

■ Principles

- ABS forms only part of ITPGRFA; also deals with conservation and sustainable use of PGRFA
- ABS goals to be achieved through a Multilateral System (MLS) of exchange of genetic resources
- Annex 1: list of crops (35 food crops, 29 forages) covered under the MLS



International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)



- Access to MLS material
 - on the basis of Standard Material Transfer Agreement (SMTA)
 - *so no bilateral negotiations necessary*
 - SMTA only for research, breeding and training for food and agriculture
- Benefit-sharing
 - benefits include non-monetary benefits (access to PGRFA, exchange of information, access to and transfer of technology, capacity-building) and monetary benefits
 - monetary benefit-sharing (currently) only mandatory if product is not available without restriction
 - monetary benefits placed into an International Benefit-Sharing Fund, to be used for projects in developing countries
- *Some countries also make non-MLS material available under the SMTA*

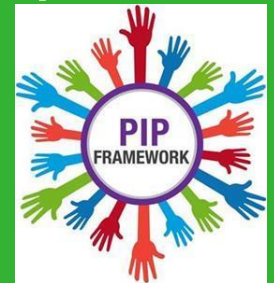
International Treaty on Plant Genetic for Food and Agriculture (ITPGRFA)



- Perceived shortcomings of MLS:
 - lack of access
 - lack of monetary benefit-sharing
- Enhancement process going on since 2013:
 - expansion of the scope of the MLS from the 64 food crops and forages now mentioned in Annex I to include (in principle) all PGRFA
 - subscription system to assure earlier and more monetary benefit-sharing
 - also mandatory monetary benefit sharing when product is available without restriction
 - reflected in revised SMTA

Pandemic Influenza Preparedness (PIP) Framework

- Agreed within WHO (World Health Organization)
- In force since 24 May 2011
- 196 Parties
- Objective
 - to improve pandemic influenza preparedness and response by establishing a system for 1) the global sharing of H5N1 and other influenza viruses with pandemic potential and 2) access to vaccines and sharing of other benefits
- ABS aspects
 - only covers influenza viruses with human pandemic potential
 - multilateral system of benefit-sharing
 - access to influenza viruses on the basis of a Standard Material Transfer Agreement (SMTA)



Multilateral Mechanism for Digital Sequence Information (MLM)



- Term “Digital Sequence Information” (“DSI”) not defined, but used as ‘placeholder’
 - primarily refers to information on the genetic composition of organisms
- “DSI” is discussed in various international fora, e.g.
 - Convention on Biological Diversity (CBD) / Nagoya Protocol
 - International instrument on the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (BBNJ)
 - World Health Organization (WHO)
 - International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
- Main discussion forum: CBD

Multilateral Mechanism for Digital Sequence Information (MLM)



- CBD meeting Montreal, December 2022
 - Agreement that Multilateral Mechanism (MLM) for DSI would be established, with a global fund for benefit-sharing
- CBD meeting Cali, October-November 2024
 - Operationalisation of MLM for DSI:
 - scope: databases that make DSI publicly available
 - open access maintained
 - larger companies in sectors relying on DSI are encouraged to contribute to the benefit-sharing fund
 - indicative rates: 0.1% of revenues or 1% of profits
 - contributors receive certificate to create legal certainty
 - fund to be used for the conservation and sustainable use of biodiversity in developing countries
 - 50% of funds go to Indigenous Peoples and Local Communities

BBNJ Treaty (“Treaty of the High Seas”)

- BBNJ Treaty: *“International instrument on the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction”*
 - Is about activities with marine biological diversity in areas beyond national jurisdiction
 - Adopted on 19 June 2023
 - Will enter into force after ratification by 60 Parties
- Includes ABS provisions for marine genetic resources in areas beyond national jurisdiction and associated DSI
 - Notification of activities mandatory
 - Benefit-Sharing through a financial mechanism, decoupled from access
 - Benefit-Sharing Fund initially filled through contributions by countries; future modalities will be further discussed



Pathogen Access and Benefit-Sharing (PABS) System



- A multilateral system for access and benefit sharing for pathogens with pandemic potential
- Addressing physical samples as well as sequence information
- Coordinated and convened by the World Health Organization (WHO)
- Originally planned to be adopted during the last WHO World Health Assembly in May-June 2024
- Negotiations were extended, with a view for adoption in December 2024, with a final deadline for May 2025
- However, Member States did not succeed in adopting the PABS System in 2025 and decided to establish a PABS system within the broader Pandemic Agreement, but to defer its development and operationalization to a future process

What does this mean for plant genebanks?

- ABS rules apply to *utilisation* of genetic resources, not to *having them in possession*
- However, genebanks want to supply genetic resources which can be utilised
 - *therefore, they must take into account ABS rules*
- Most relevant instruments for plant genebanks
 - CBD/Nagoya Protocol
 - International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
- Plant genebanks can use the bilateral route (CBD/Nagoya Protocol) or the multilateral route (ITPGRFA)



ABS routes for plant genebanks

Plant Genetic Resources

- Convention on Biological Diversity (CBD, 1994)



- Nagoya Protocol (2014)



- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA, 2004)



Genebanks

ABS routes for plant genebanks

■ Convention on Biological Diversity (CBD, 1993)

- 'national sovereignty' instead of 'common heritage'
- ABS through bilateral contacts and on a case-by-case basis



■ Nagoya Protocol (2014)

- access to genetic resources usually on the basis of Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT), established in bilateral negotiations arrangements
- compliance to ABS rules to be monitored by the countries where the genetic resources are utilized



■ International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA, 2014)

- ABS through a multilateral system (MLS) of exchange of genetic resources
- access to MLS on basis of Standard Material Transfer Agreement (SMTA)
- monetary benefits placed into an International Benefit-Sharing Fund



More information



- Website CBD / Nagoya Protocol (www.cbd.int)
 - maintained by CBD/NP
 - lists of Parties to CBD and NP and contact points
 - Information on meetings and processes

- ABS Clearing House (absch.cbd.int/)
 - maintained by CBD/NP
 - country information (contact persons, laws)

- Website of National Focal Point NL (www.absfocalpoint.nl)
 - bilingual (Dutch/English)
 - information on rules and what to do
 - interactive help tool
 - news articles on new developments
 - subscription to ABS newsletter
 - FAQ

Thank you for your attention!

www.absfocalpoint.nl

NagoyaNL@wur.nl

