



The concept Genetic Resources & ABS and the Interfaces with other International Frameworks

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Aims of this presentation

Two analysis from FNI:

- **'Genetic Resources' in the CBD: the Wording, the Past, the Present and the Future (WGR/9)**
- International Agreements and Processes Affecting an International Regime on Access and Benefit Sharing under the Convention on Biological Diversity:
 - *Implications for its Scope and Possibilities of a Sectoral Approach* (www.fni.no/ABS)

'Genetic Resources' in the CBD: the Wording, the Past, the Present and the Future

1. A Closer Look at the Definition of 'Genetic Resources'
2. Relationship between the Genetic Resources and Traditional Knowledge
3. History: What Was Meant to Be Captured by 'Genetic Resources' Historically?
4. Changes in Knowledge and Technology and the Concept Genetic Resources
5. Examples on How the Concept 'Genetic Resources' Has Been Used
6. A Closer Look at the Work of the Expert Group of Definitions

A Closer Look at the Definition of 'Genetic Resources'

- Not commonly defined before the CBD.
- Lack of consistency: a problem for functionality of ABS and its enforcement.
 - Why? Obstructs legal certainty

Functional Units of Heredity

- Not specified – leaves the concept somewhat open
- Dynamic: Current and Changing Knowledge and Technology

Of Actual or Potential Value

- When realising the actual or potential value of functional units of heredity

Relationship between the Genetic Resources and Traditional Knowledge

- Relevant differences between Access to TK and Utilisation of TK
- TK in the IGC: as an object for property (ip)
 - Defensive protection – ensure not illegally patented
- TK-ABS: need for specifying and making it legally certain
- Probably: not solve all problems in the IR, but rather specific parts of TK-ABS

History: What Was Meant to Be Captured by 'Genetic Resources' Historically?

A different situation technologically than today

The link between the three objectives:

- Conservation
- Sustainable use
- Benefit sharing – both an objective and a practical means to realise the two others

What then was functional – or functional when accessed and used?



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Changes in Knowledge and Technology and the Concept Genetic Resources

- **Genomics:** mapping the complete genome of organisms, or *full genome sequencing*
- **Proteomics:** large-scale study of [proteins](#), in particular their [structures](#) and [functions](#)
- **Bioinformatics:** the application of computer science and information technology to the field of molecular biology
- **Synthetic Biology:** recreate in unnatural chemical systems the emergent properties of living systems



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Bio-economy

- economic value based on biology

‘Biotechnology will drive expansion of the global economy, increasing wealth while reducing Humankind’s environmental footprint.’

www.bio-economy.net/bioeconomy/about_bioeconomy/index_about_bioeconomy.html

=> **ABS important in ensuring the world population a share?**

Examples on How the Concept ‘GR’ Has Been Used

- International Undertaking of the FAO: accessions of plant breeding material
- ITPGRFA: “reproductive and vegetative propagating material, containing functional units of heredity” – accessions for breeding
- Commission on GR in FAO:
 - Genebank Standards: accessions in the gene banks
 - on-farm management: seeds kept by farmers
 - animal genetic resources: genetic diversity
 - invertebrates and micro-organisms: no mention of GR – biodiversit
 - aquatic genetic resources – general terms not easy to extract a meaning
 - Biotechnologies: uses rather than resources
- Intergovernmental Commission: GR as a basis for innovation – informational dimension
- Patent WTO/WIPO only in the disclosure discussion
- UN Law of the Sea: not specifically regulated
- Antarctic: bioprospecting – not the resources
- Ex situ collections: depending on the medium for storage

A Closer Look at the Work of the Expert Group of Definitions

Two dimensions:

1. The micro-tangible material
2. **information** encapsulated in the nucleotide sequence of the genetic material can be read and digitalised and easily acquired

Utilisation of GR: List of clusters of uses

Derivatives – are functional units of heredity used?

Lessons learned

- **The knowledge and technological situation has evolved since 1992**
 - Intend to target the best art
 - Could imply: that knowledge or meant to be dynamic
 - Terms themselves indicate dynamic elements
 - **Differences of applicability of the definition access and utilisation**
- Dynamic/flexible versus Legal Certain and Enforceable

- Documents available:
www.cbd.int/wgrabs9/docs:
UNEP/CBD/WG-ABS/9/INF/1

www.fni.no/abs/publication-41.html

Thank you for your attention!