
An analytical framework for the comparison of use and exchange patterns regarding genetic resources for food and agriculture

Multi-Stakeholder Expert Dialogue on Access and Benefit-Sharing for Genetic Resources for Food and Agriculture

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Wide recognition of:

“The special nature of genetic resources for food and agriculture, their distinctive features and problems needing distinctive solutions”

- What are the specific features of GRFA?
 - To what degree are they common to all GRFA?
 - What do they mean for ABS?
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Exotic material

Improved material

Intra-specific diversity



Wide exchange
of GR

Incremental
improvement

Multiple input
products

Continuous need
for new variation

Conservation
through use

Product of use of GR
is a GR itself

Broad range of
holders/users

importance of
non-monetary benefits



Consequences on ABS for
genetic resources for food and agriculture

Incremental improvement

- Over a long period of time
- By many people
- Under constant exchange



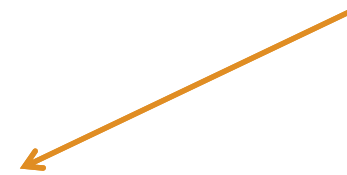
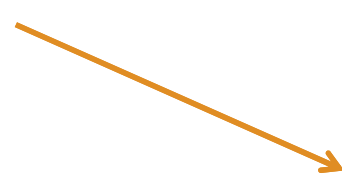
Dispersed contribution to the development of a specific GR

Multi-input products

- One product is developed out of a broad range of genetic inputs



Dispersed benefits derived from the use of a specific GR



Double dispersal process

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- Difficulty to assign the right to determine access to and receive benefit-sharing from the use of a specific genetic resource
 - Difficulty to establish the individual shares of contribution to a GR and hence from BS
 - Low average value of individual contribution to a GR
 - Difficulty to assess the contribution of a specific GR to a product
 - Low average value of the individual contribution of a specific GR to a product
 - Difficulty to handle GR under different legal conditions contributing to the same product



- Increased administrative costs for access and benefit-sharing on an individual basis
 - Individual benefits to be shared are relatively low
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Use of intra-specific diversity



Continuous need for new variation



Multi-input products



Incremental improvement



- High number and frequency of exchanges of germplasm samples with a low average value per individual sample
- High number of products with a relatively low average value
- High number of potential benefit-sharing events with a low average value



Transaction costs for access and benefit-sharing have to be low per individual case



High potential for realizing economies of scale through aggregation and standardization

The product itself can be used as a GR

- No clear divide between providers and recipients of GR
 - No clear line can be drawn between biological resources (BR) and GR, between production and reproduction individuals
 - Many agricultural products may be used as BR or GR; ultimate purpose often unclear and unpredictable at time of accession
 - Depends on level of specialization on breeding and production
 - Depends on level of specialization on conservation
 - Difficult to target GR for regulation
 - Need to cover a wide range of market transactions of biological resources
 - Low ratio between regulated transactions and targeted transactions
 - High regulation cost per targeted transaction
 - Potential for ex post regulation
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The product itself is an input to further innovation

From a biological point of view, the innovation contained in a product is freely available to others

Realization of individual benefits from use of GR requires biological, contractual or legal protection of innovation



Measures taken to reward innovation have the risk of restricting access to GR

Challenge: establishing an adequate balance between rewarding innovation and not restricting access to GR

Holders and users of GR

- GR are held and used by a broad range of different stakeholders; under different types of ownership
- Many GR are held and can be accessed *ex situ*
- Many GR are privately owned

ABS → measures need to accommodate a wide range of realities, exchange practices and requirement

- Few users have extensive financial, administrative and legal capacities

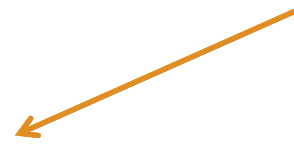
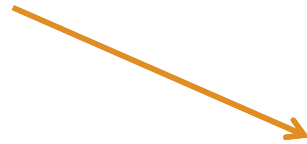
Risk → of excluding other users through complex ABS procedures

Over a long time GR have been widely exchanged across countries and regions



Important part of genetic diversity used today is of exotic origin

Research and development implies continuous need for new variation



Interdependence of countries regarding GR

- Most countries need to access GR from elsewhere
- Cross-boarder exchange of GR important for normal functioning of the sector



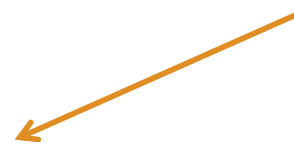
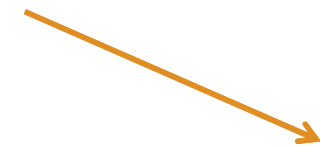
Interdependence of countries regarding their GR

- No country is just a provider or just a recipient country
 - Everybody has an interest in easy access to GR from elsewhere
 - Everybody has an interest in increasing the capacities of others to use and conserve GR
 - High potential of non-commercial BS mechanisms
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Importance of non-monetary BS mechanisms

Use of GR creates important non-commercial benefits

Many countries use the same or similar GR



High potential for non-monetary BS mechanisms

Conservation through use

- Genetic resources for food and agriculture are a product of human activity
- They do not exist without continued human intervention
- The conservation of GRFA depends upon their use



Promote use of GR to ensure effective conservation

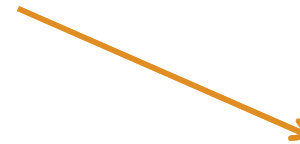
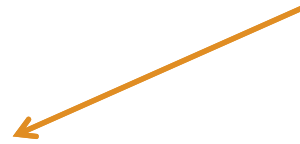
- Enhance capacities for use and conservation
- Facilitate access to GR for use



Conservation and use are mutually reinforcing

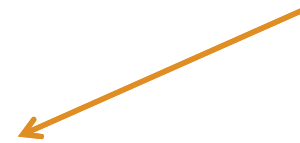
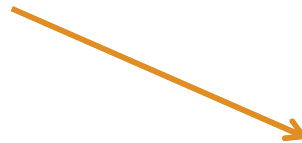
- Resources for conservation should not be mobilized by putting an additional cost to use
 - Advantage of decoupling BS and use of specific GR
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Access and Benefit-Sharing
Equity Development Conservation



Access to genetic
resources

Research and
development
capacities



Sustainable agricultural production
and food security

Thank you!

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