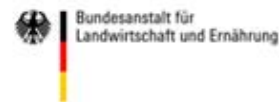




Genetic Resources for EU Agriculture: Status and Vision

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Findings of the Preparatory Action

Daniel Traon, Arcadia International



[Content

- Further considerations on the scope of the Preparatory Action
- Understanding of the 7 themes
- Presentation of the results/findings per Theme
- Conclusions: Towards recommendations



Further considerations on the scope of the Preparatory Action

- Conservation AND sustainable use
- Genetic resources: diversity in definitions. Which one to consider?
 - WIDE: Consideration the CBD definition (Article 2) :

*"Genetic resources" means genetic material of **actual** or **potential** value.*

- The different domains: genetic resources (mainly) for food and agriculture.
 - Out of the scope: hobby gardening, valorisation other than for F&A (e.g. cosmetics, pharma), valorisation to alternative ag. input products (biocontrol, biostimulants, etc.)
 - Each domain has a specific profile as regards « Conservation » and « use »: **large variability of cases/situations.**



Understanding of the 7 themes

The analysis addresses the objectives stated above across **seven different themes**:

- 1. Improvement of the communication between MS** concerning best practices and the harmonisation of efforts in the conservation and sustainable use of genetic resources;
- 2. Enhancing networking among key stakeholders and end-users** in view of exploring marketing (and other cooperation) opportunities, such as provided by quality schemes and short supply chains;
- 3. Improvement of the exchange of knowledge and research** on genetic diversity in agriculture systems;
- 4. Adaptation of breeding methods and legislation** to the need of conservation and sustainable use of genetic resources;
- 5. Contribution to the successful implementation of rural development measures** concerning genetic diversity in agriculture;
- 6. Explore bottlenecks and enabling conditions for the sustainable use** of genetic resources in agriculture; and
- 7. Reduction of the unnecessary administrative burden** so as to provide better access to actions.



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The analysis addresses the objectives stated above across **seven different themes**:

Communication and networks between stakeholders and public bodies

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2. **Enhancing networking among key stakeholders and end-users** in view of exploring marketing (and other cooperation) opportunities, such as provided by quality schemes and short supply chains;
3. **Improvement of the exchange of knowledge and research** on genetic diversity in agriculture systems;

Public intervention (policies and funding)

4. **Adaptation of breeding methods and legislation** to the need of conservation and sustainable use of genetic resources;
5. **Contribution to the successful implementation of rural development measures** concerning genetic diversity in agriculture;
6. **Explore bottlenecks and enabling conditions for the sustainable use** of genetic resources in agriculture; and
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5. **Contribution to the successful implementation of rural development measures** concerning genetic diversity in agriculture;

6. **Explore bottlenecks and enabling conditions for the sustainable use** of genetic resources in agriculture; and

Overarching theme

7. **Reduction of the unnecessary administrative burden** so as to provide better access to actions.



[Presentation of the findings/conclusions per Theme

1) Here are the findings and conclusions !



2) Do you agree ?

(the polling system)



Findings & conclusions Theme 1: Improvement of the communication between MS

“Improvement of the communication between MS concerning best practices and the harmonisation of efforts in the conservation and sustainable use of genetic resources”

Theme 1 covers several communication channels:

1. Communication between stakeholders involved in *ex situ* conservation (e.g. ECPGR, ERFP, EUFORGEN, MIRRI) and additional sub-regional platform)
2. Communication between stakeholders involved in *in situ* management (e.g. peasant networks, breeders and seed savers networks, NGOs, etc...); and
3. Exchange between the two communities through their own communication channels.



Findings & conclusions Theme 1: Improvement of the communication between MS

Ex situ conservation:

- While the past and current positive role of the ECPGR, ERFP, EUFORGEN, MIRRI networks is being recognised; it is considered that these coordination platforms do not have a sufficient impact at European level, due to a lack of funding and recognition from MS, the EU and, also, stakeholder groups.
- MS authorities are not strongly involved in shaping and coordinating GR activities (less and less).
- Perceived lack of connection (by stakeholders) between these networks and the EU policy framework.
- These networks have been created and are currently (mainly) led by the research community.



Findings & conclusions Theme 1: Improvement of the communication between MS

In situ conservation:

- Existing networks are few and poorly funded.
- Coordination platform approaches such as for *ex situ* do not seem to be fully relevant for *in situ* communities : what is required is networking and sharing of good practices rather than coordination bodies.
- Link between *in situ* and genebanks is not considered optimal



Findings & conclusions Theme 1: Improvement of the communication between MS

In situ and *ex situ* relationship:

- *Ex situ* conservation and *in situ* management are often undertaken in different stakeholders communities, isolated from each other and with only limited interest/efforts in finding synergies and complementarities.
- A workshop was organised to discuss issues between the *in situ* and *ex situ* communities. During this event, participants (about 40) indicated their interest for further discussions and exchanges to improve « integration ».
- This workshop further discussed issues related to the lack of transdisciplinary networks to bridge the gap between on-farm research, implementation, food chain and policy; and described the varying culture of the different stakeholders (formal vs. Informal approaches)



Findings & conclusions Theme 1: Improvement of the communication between MS

Do you agree with the conclusions for Theme 1?

1. Do you consider that these conclusions reflect Your perception of the situation? (Yes, No)
2. Do you consider that significant issues/benefits are missing in the analysis? (Yes, No)



Findings Theme 2:

Enhancing networking among key stakeholders & end-users

“Enhancing networking among key stakeholders and end-users in view of exploring marketing (and other cooperation) opportunities, such as provided by quality schemes and short supply chains”

- Utilisation seems to be key for the conservation of GR, and also for R&D activities.
- Good practices and success stories on valorisation of rare GR and value chain development need to be further disseminated.
- Marketing activities should include the dissemination of information, publications and research results, as well as awareness raising and efforts to bring knowledge and information about GR to the general public.



Findings Theme 2:

Enhancing networking among key stakeholders & end-users

- A two-step approach is suggested in order to explore marketing opportunities:
 - A first step consisting in analysing and characterising products in order to secure correct and optimal product positioning, raise awareness and demonstrate added value to final consumer (build and sell the Story !);
 - In a second step, a network or platform should be reinforced for producers to sell their products, since resources and knowledge required to set-up a business are not always available (examples: European Enterprise Network, etc.).



Findings Theme 2:

Enhancing networking among key stakeholders & end-users

- A large number of valorisation projects may exist but their development does not take-off because resources and good practices are not available, especially at initiation of the projects.
- EU farm promotional programmes do not fully correspond to the needs of GR actors as they are generally focusing on export, multi-national cooperation and large marketing campaigns. The establishment of a « *light version* » for small initiatives would be a positive contribution.
- Administrative burden overall limits the development of valorisation projects (see Theme 7).
- Introduction of the idea of « competence centres » that could be set-up at local/regional or even national level. These centers should include all actors necessary for launching a valorisation project (opportunities via Operational Group principles of the EIP)



Findings Theme 2:

Enhancing networking among key stakeholders & end-users

Do you agree with the conclusions for Theme 2?

1. Do you consider that these conclusions reflect Your perception of the situation? (Yes, No)
2. Do you consider that significant issues/benefits are missing in the analysis? (Yes, No)



Findings Theme 3:

Improvement of the exchange of knowledge and research

“Improvement of the exchange of knowledge and research on genetic diversity in agriculture systems”

- Three different aspects of knowledge were considered in this discussion:
 - Technical conservation methodologies to preserve the gene pools and make these available to potential users (including through *in situ*, *ex situ*, and on-farm approaches);
 - Coherent organisation and coordination of GR conservation and sustainable use at the international and national level; and
 - Utilisation of GR in breeding and for other services.



Findings Theme 3:

Improvement of the exchange of knowledge and research

- Increased knowledge with regard to conservation methodologies will enhance efficiency and efficacy. Most actors involved in conserving GR have to act on a narrow scientific basis. This is mainly due to two factors:
 - The necessary knowledge is not always existing due to a certain lack of dedicated research (methodologies on conservation);
 - The knowledge does not sufficiently reach the actors that need it, or is insufficiently adopted. The knowledge generally resides amongst the academia, in the public sector, and in private companies.
 - The available knowledge is not fully translated in accessible tools and capacity building materials in the appropriate languages and for the various stakeholder groups. This leads to projects that are “*re-inventing the wheels*” rather than building on knowledge.



Findings Theme 3:

Improvement of the exchange of knowledge and research

Do you agree with the conclusions for Theme 3?

1. Do you consider that these conclusions reflect Your perception of the situation? (Yes, No)
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Findings Theme 4:

Adaptation of breeding methods and legislation

“Adaptation of breeding methods and legislation to the need of conservation and sustainable use of genetic resources”

“ Breeding methods”

and

“legislation”

have been analysed separately.



Findings Theme 4:

Adaptation of breeding methods and legislation

Adaptation of breeding methods:

- Technological developments increasingly offer opportunities for pre-breeding (e.g. to improve characterisation: the weakest step in conservation), breeding with the help of marker assisted selection, and the use of other molecular tool.
- Need to further adapt breeding methods to breeding for diversity (to e.g. increase resilience), preferably through participatory approaches that take advantage of the specific features of local breeds and varieties, such as pest or disease resistance and higher tolerance to sub-optimal conditions (animal breeds and new tolerant plant varieties).



Findings Theme 4:

Adaptation of breeding methods and legislation

Adaptation of breeding methods:

- Not all actors (breeders) can afford the use of these advanced technologies as too expensive.
- As there is a need to re-inforce capacities for the phenotypic and genotypic characterisation of accessions, these efforts would need support from public funding or in the case of high-value crops; this could ideally be done in the form of public/private partnership approaches.



Findings Theme 4:

Adaptation of breeding methods and legislation

Adaptation of legislation:

- Study question: which legislation to consider? The one directly linked to genetic resources (narrow approach) OR all legislation addressing directly or indirectly GRs (wide approach)?
- Decision to analyse the « wide approach ». Therefore the analysis concerned:
 - Access & Benefit Sharing (ABS) Regulation (Nagoya Protocol)
 - Seed marketing *acquis*
 - Phytosanitary legislation (plant health)
 - Veterinary legislation
 - IP legislation
 - CAP legislation (Rural Development Policy) => see Theme 5



Findings Theme 4:

Adaptation of breeding methods and legislation

Adaptation of legislation: ABS legislation

- ABS regulation may limit access to genetic resources to be used and/or conserved:
 - The current status of implementation leads to uncertainty regarding which GR exchanges will be feasible or not.
 - The compilation of information required to complete the legal requirements on documentation of the transactions (due diligence), in particular in the form of the agreed Material Transfer Agreements (MTAs) leads to significant administrative burden (see Theme 7).



Findings Theme 4:

Adaptation of breeding methods and legislation

Adaptation of legislation: Seed marketing *acquis*

- The seed marketing directives may form a major obstacle for the development of commercially viable activities and supply chains based on non-uniform material.
- The current legislation, and more particularly the legislation on conservation varieties, is seen as restricting and costly for small and local producers.
- The newly proposed and rejected EU Regulation (2015) on marketing of plant productive material meant to improve the situation, though various stakeholders expressed concerns that this was insufficient to facilitate the use and to stimulate the commercial exploitation of such varieties and landraces.



Findings Theme 4:

Adaptation of breeding methods and legislation

Adaptation of legislation: Intellectual Property

- The issue related to the patenting of native traits is being seen as a threat for local breeding programmes, on-farm development of varieties, and participatory breeding, as the outcome of their breeding activity may not be freely marketable.
- Genebanks are also increasingly confronted with a privatisation of traits in their publicly available collections.

Adaptation of legislation: Veterinary, animal health, zootechnical legislation

- Adaptation of necessary rules (e.g. fencing obligations for outdoor pigs in control measures addressing CSF) and avoidance of unnecessary burdens for breeders (e.g. obligations for genetic evaluation for bulls) is required to limit the negative impacts on conservation and sustainable use of GRs.



Findings Theme 4:

Adaptation of breeding methods and legislation

Do you agree with the conclusions for Theme 4?

1. Do you consider that these conclusions reflect Your perception of the situation? (Yes, No)
2. Do you consider that significant issues/benefits are missing in the analysis? (Yes, No)



Findings Theme 5: Contribution to the successful implementation of rural development measures

“Contribution to the successful implementation of rural development measures concerning genetic diversity in agriculture”

- Agri-environment measures include the possibility to compensate farmers for additional costs and income foregone resulting from conservation activities aiming to preserve endangered breeds and crops under threat of genetic erosion.
- Limited success of current and previously implemented rural development measures concerning genetic diversity in agriculture is observed. This could be explained by:
 - The limited awareness of these measures to support genetic diversity conservation among stakeholders,
 - Not a priority in RDPs,
 - Relatively low levels of financial support, and
 - High levels of administrative burden.



Findings Theme 5: Contribution to the successful implementation of rural development measures

Do you agree with the conclusions for Theme 5?

1. Do you consider that these conclusions reflect Your perception of the situation? (Yes, No)
2. Do you consider that significant issues/benefits are missing in the analysis? (Yes, No)



Findings Theme 6: Explore bottlenecks and enabling conditions for the sustainable use

“Explore bottlenecks and enabling conditions for the sustainable use of genetic resources in agriculture”

Bottlenecks:

- Lack of a correct understanding and appreciation of the subject matter by various target groups
- Limited understanding and separation between biodiversity and agrobiodiversity issues. Concrete communication on the relevance of agrobiodiversity and cultivated biodiversity is needed to address its special features in relation to biodiversity in general.
- The field of genetic resources conservation is often limited to researchers and experts. It should be enlarged to wider audience.
- Lack of clear overview of all associated actors in the chain for R&D and valorisation projects: with whom could I partner? Who can help me developing my project? From where can I get good practices?



Findings Theme 6: Explore bottlenecks and enabling conditions for the sustainable use

Bottlenecks:

- In food processing, GRs and in particular MGRs (e.g. fermenting microorganisms; or biotechnological derivatives of genetic resources such as enzymes, protein extracts or nano-proteins) play an important role. The reduction of variability in the genetic resources available may restrict the potential to develop new innovative and high-value food products.
- Agro-tourism and gastro-tourism are key in the sustainable use of GR. Tourist activities were reported to provide a means of supporting the conservation of GR. However they are largely underexploited.
- Projects which are not demonstrating added value for the final actors /end users in the value chain appear to be hardly sustainable.



Findings Theme 6: Explore bottlenecks and enabling conditions for the sustainable use

Enabling conditions:

- Public private partnerships (PPPs) are seen as an interesting tool to resolve the lack of characterisation of *ex situ* collections.
- The development of alternative products marketed via alternative supply chains benefits from the existence of networks of farmers at local levels. Need to further develop these networks (e.g. competence centres, Operational Groups of EIP)
- The current data management systems that have been created by the European networks (ECPGR, ERFP, MIRRI, EUFORGEN) offer a robust basis to further develop pan-European data management and data sharing between *ex situ* collections and with user communities.
- Availability of good practices, knowledge of success stories are key prerequisite and motivation factors to launch new valorisation projects?



Findings Theme 6: Explore bottlenecks and enabling conditions for the sustainable use

Do you agree with the conclusions for Theme 6?

1. Do you consider that these conclusions reflect Your perception of the situation? (Yes, No)
2. Do you consider that significant issues/benefits are missing in the analysis? (Yes, No)



Findings Theme 7:

Reduction of the unnecessary administrative burden

“Reduction of the unnecessary administrative burden so as to provide better access to actions”

Definition:

Administrative burdens are the costs to businesses of complying with the information obligations resulting from authorities and government imposed legislation and regulation.



Findings Theme 7:

Reduction of the unnecessary administrative burden

- Substantial administrative burden is related to the undertaking of efforts to conserve and use genetic resources. Obligations leading to (perceived) administrative burden are found during:
 - Implementation of the ABS Regulation (Nagoya Protocol),
 - The application process for getting subsidies from the EARFD,
 - R&D EU projects (especially for SMEs).
- Lack of level-playing field as smaller organisations such as NGOs and SMEs, do not have the capacity and resources available to deal with the administrative burden. As a consequence, such organisations often choose not to make the efforts to access certain measures and thus abandon opportunities to participate in these actions.



Findings Theme 7:

Reduction of the unnecessary administrative burden

Do you agree with the conclusions for Theme 7?

1. Do you consider that these conclusions reflect Your perception of the situation? (Yes, No)
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[We welcome Your opinion and invite you to comment on the findings and results!

Send Your comments and remarks to contact@geneticresources.eu or by contacting the study team directly. **(deadline: 16 June).**

