

GenRes Bridge



# HORIZON 2020



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Joint meetings of

ABS Task force,

Documentation and Information;

Ex situ conservation,

In situ conservation and valorisation of AnGR

Working Groups

Madrid, Spain, May 21st – 24th 2019

European Regional Focal Point for Animal Genetic Resources

# GenRes Bridge



**Acronym: GenRes Bridge**

**Title: Joining forces for genetic  
resources and biodiversity  
management**

# Joining Forces – unique opportunity

## ➤ Three European Genetic Resources Networks

- Networks of National Coordinators to raise a **common voice** in the Food, Agriculture, Forestry and biodiversity sectors

## ➤ Objectives

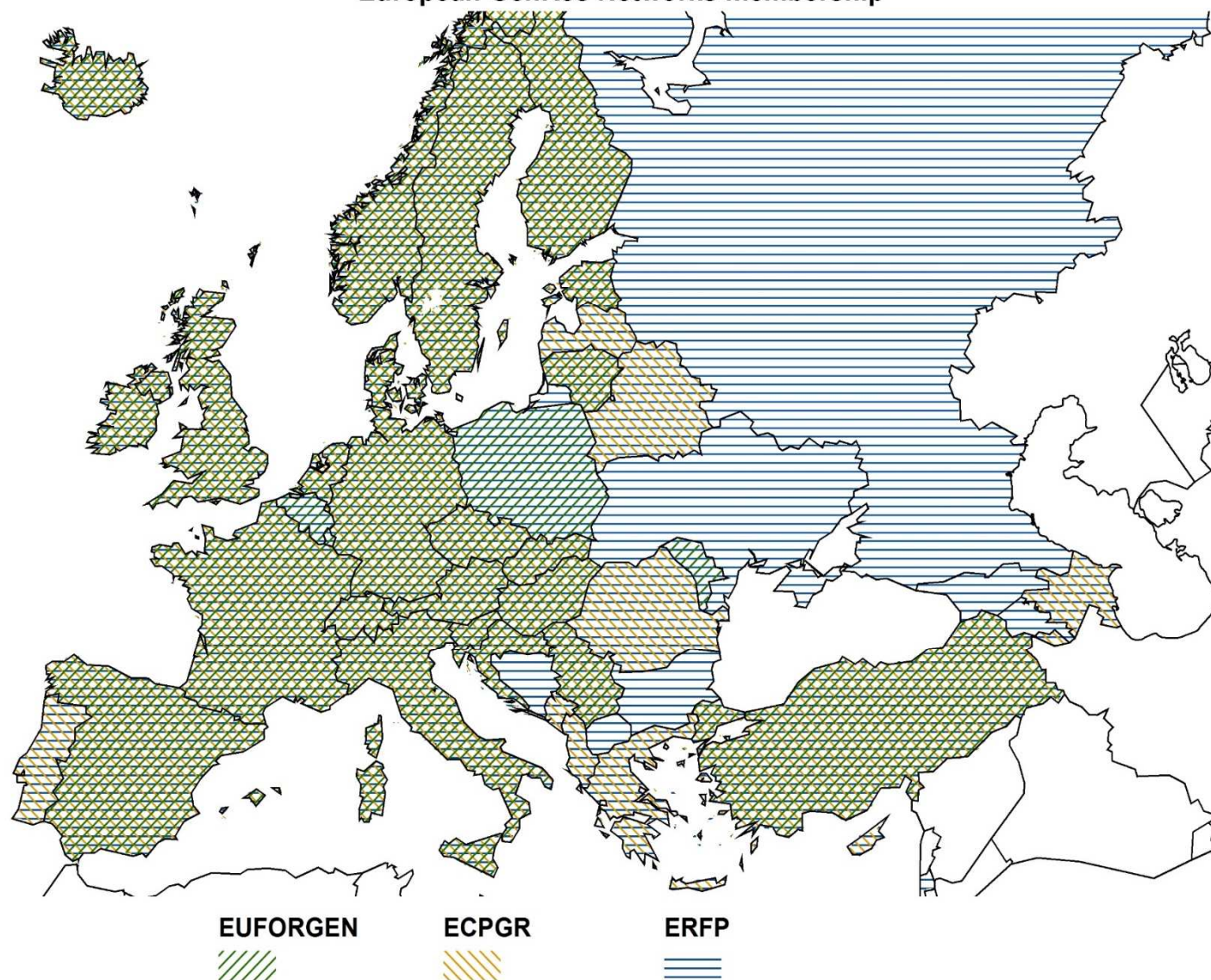
- More rational system of conservation
- Information and knowledge exchange
- Technical collaboration
- Sharing responsibilities and tasks

# GenRes Bridge





### European GenRes Networks membership





## ERFP objectives

- To support the *in situ* and *ex situ* conservation and sustainable use of AnGR in European countries
- To facilitate the implementation of the FAO Global Plan of Action for AnGR in Europe
- To assist and enhance the AnGR activities of NC's at the European level

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## GenRes Bridge - evolution

- **EU Preparatory Action on Genetic Resources**

(2016; Commissioned by EU DG AGRI)

“Summarizing the recommendations, it is proposed to develop an EU agro-biodiversity strategy that considers the conservation and valorisation of genetic resources for food and agriculture in line with the EU Biodiversity Strategy”

- Joint letter by ERFP, ECPGR and EUFORGEN to European Commission, stressing the PrepAct recommendations

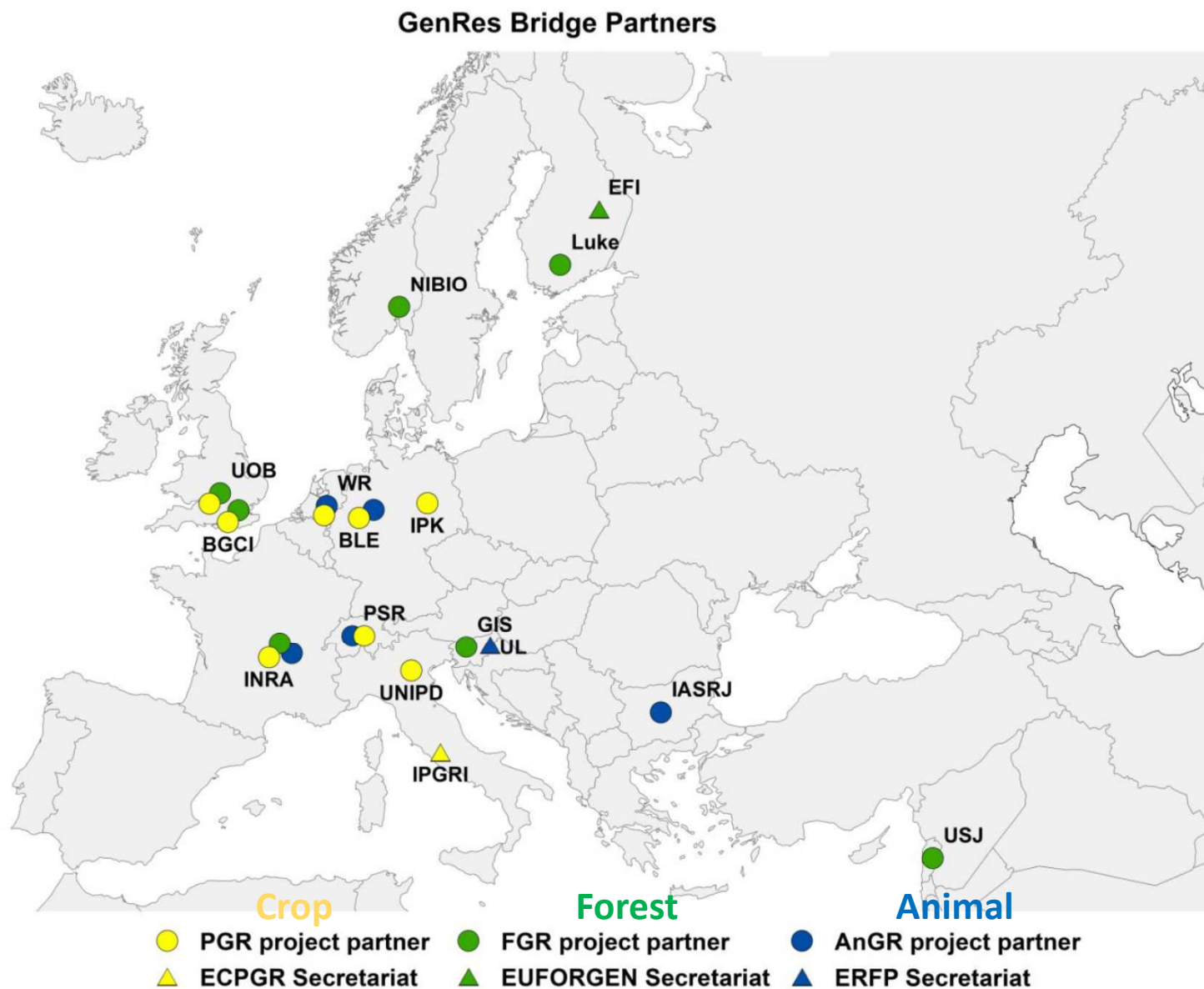
- Horizon2020 – Call for Proposals – Coordination and Support Action



## Joining Forces - partners

N°	Participant organization name (acronym)	Country
1	European Forest Institute (EFI)	International
2	International Plant Genetic Resources Institute (IPGRI)	International
3	Univerza v Ljubljani (UL)	Slovenia
4	Gozdarski Institut Slovenije (GIS)	Slovenia
5	Norsk Institutt for Bioekonomi (NIBIO)	Norway
6	Stichting Wageningen Research (WR)	The Netherlands
7	Bundesanstalt für Landwirtschaft und Ernährung (BLE)	Germany
8	Luonnonvarakeskus (Luke)	Finland
9	Botanic Gardens Conservation International lbg (BGCI)	United Kingdom
10	Institut national de la recherche agronomique (INRA)	France
11	Universita degli studi di Padova (UNIPD)	Italy
12	The University of Birmingham (UOB)	United Kingdom
13	Izpalnitelna agentsia po seleksia i reproduktsia v zhivotnovadstvoto (IASRJ)	Bulgaria
14	Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK)	Germany

Figure 7: Participants and the three networks extent



## Objectives of GenRes Bridge (1)

- ✓ **increase the effectiveness** of sustainable management for crop, forest and animal GenRes
- ✓ **widen capacities to increase the knowledge** on conserved diversity of crop, forest and animal GenRes
- ✓ **widen individual network capacities** to enhance the status and effectiveness of conservation and use of GenRes
- ✓ **enhance the conservation status of GenRes** by establishing high quality, harmonized standards for GenRes conservation, management and description



## Objectives of GenRes Bridge (2)

- ✓ **improve services offered to end-users of GenRes** by promoting innovative ways to share resources and services
- ✓ **Develop integrated conservation strategy** for (forest, animal and crop) genetic resources in Europe
  - ✓ Missing: Formal EU framework for Agrobiodiversity/Genetic Resources conservation and use
- ✓ **Present outcomes at high-level policy events**

## 3 Thematic Work Packages

1. **European integrated GenRes strategy:** engaging a wide range of stakeholders to share perspectives, knowledge and current strategies, and to develop an integrated GenRes strategy;
2. GenRes in action: **Taking up science results into GenRes management and strategy preparation**, collating demonstration cases, improving user-oriented services, standards and quality management;
3. **Enhancing GenRes data delivery:** improving quality and quantity of information already stored in the central information systems (EURISCO, EUFGIS and EFABIS) through training and linking them to other databases.

## Work plan structure

### WP1 Project management

#### WP2 European integrated GenRes strategy

T2.1 Stakeholders and geographical scope

T2.2 Sharing strategies and perspectives for conservation and use of GenRes

T2.3 European integrated strategy for the conservation and use of crop, forest and animal genetic resources

#### WP3 GenRes in action

T3.1 Workshops to consolidate scientific messages

T3.2 Formulating the rationale for conservation of GenRes at landscape level through demonstration cases

T3.3 Enhancing and integrating user-oriented services

T3.4 Implementation of quality management

T3.5 Sharing resources and services within and between GenRes networks

#### WP4 Enhancing GenRes data delivery

T4.1 Enhancing the central GenRes information systems

T4.2 Linking information systems

T4.3 GenRes journal

#### WP5 Communication

T5.1 Communication with target audiences

T5.2 Stakeholders' engagement

T5.3 GenRes gateway

T1.1 Managing GenRes Bridge

T1.2 Supervising project quality and reporting

T1.3 Internal communication



## EXPECTED IMPACTS (1)

- 1. Development and/or implementation of integrated strategies for conservation and use of crop, forest and animal GenRes as well as for wider biodiversity**
- 2. Enhance user oriented services provided by networks involved in plant (agriculture and forestry) and animal GenRes management, such as:**
  - information systems
  - genebanks and conservation units
  - transfer of GenRes
  - communication of GenRes science, methods and guidelines to end-users



## EXPECTED IMPACTS (2)

3. **Help establishing high quality, harmonized standards for the management and description of GenRes across Europe (and beyond)**
4. **Increase the quantity and quality of data in established information systems for crop, forest and animal GenRes**
5. **Promote innovative ways of sharing resources and services between genebanks/ in-situ conservation sites in Europe and beyond**



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[www.animalgeneticresources.net](http://www.animalgeneticresources.net)  
[www.rfp-europe.org](http://www.rfp-europe.org)

# Role of the ERFP and first actions

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## Support and role of the ERFP network (1)

### 1. To map stakeholders across the crop, forest and animal domains and wider (agro) biodiversity context further building on the results of the first PrepAct (1950 stakeholders identified, mainly from EU countries)

- Mapping will include **stakeholders of ENP countries**, particularly within the Mediterranean basin.
- In progress, all NC received already prepared document to update the list.
- The most important stakeholders from countries should be identified
- For ERFP domain all members of the WG – included
- We are positive and hoping on feedback from our network

## Support and role of the ERFP network (2)

### 2. Workshop to share knowledge and elaborate key scientific messages in July

How life sciences and human sciences help GenRes managers better account for multiple uncertainties in GenRes strategies within the context of global change?

#### Topics to be addressed:

- the choice of GR to be conserved (e.g. new criteria, new origins)
- the conservation technics and tools (e.g. related to Quality issues)
- the conservation strategies (e.g. more adaptive and dynamic strategies)
- the GR user perspectives
- the national and international policy perspectives

## Support and role of the ERFP network (3)

### 2. Workshop to share knowledge and elaborate key scientific messages in July

How recent scientific evidence can support the development and improvement of dynamic in situ GenRes conservation strategies and implementation?

#### Topics to be addressed:

- what is effectively done in terms of in situ strategies in Europe (definition, goals, actors, methodologies, European coordination or not, etc.)
- what could be done but is not (possible barriers)
- what are the current questions for research to support in situ strategies
- what are the effective or possible connections between in situ and ex situ strategies
- how does in situ strategy connect or not with European and global biodiversity conservation programmes

## Support and role of the ERFP network (4)

### 2. Workshop to share knowledge and elaborate key scientific messages in July

- **7 experts from ERFP domain needed** to attend workshop
- Proposal: WG Chair's are already partners in the project, as well as two Secretariats
- Additional experts, willing to contribute – identified by WG? + SC members?
- Through the WG members and Chairs, report of the two workshop will be shared with ERFP network for approval



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# Strategy development

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## Process/methodology - development of the Strategy

1. **Collection and analysis** of available GenRes Strategy information
  - European GenRes Strategy for Animal Genetic Resources (feedback from NC through the Questionnaire, existing information will be reviewed, FAO)
2. **Review and agree contents** of Integrated GenRes Strategy
  - ERFP Ad *hoc* action group + whole network
3. **Stimulate countries** to develop national animal, crop and forestry, and / or integrated inter-sector genetic resource conservation and use strategies
4. Design **informatics structure** to collect and collate data / information
5. Organize “**Sharing strategies and perspectives**” **workshop** of experts, GR stakeholders and end-users
6. Draft GenRes Strategy and **reviewed and validated** by ERFP network

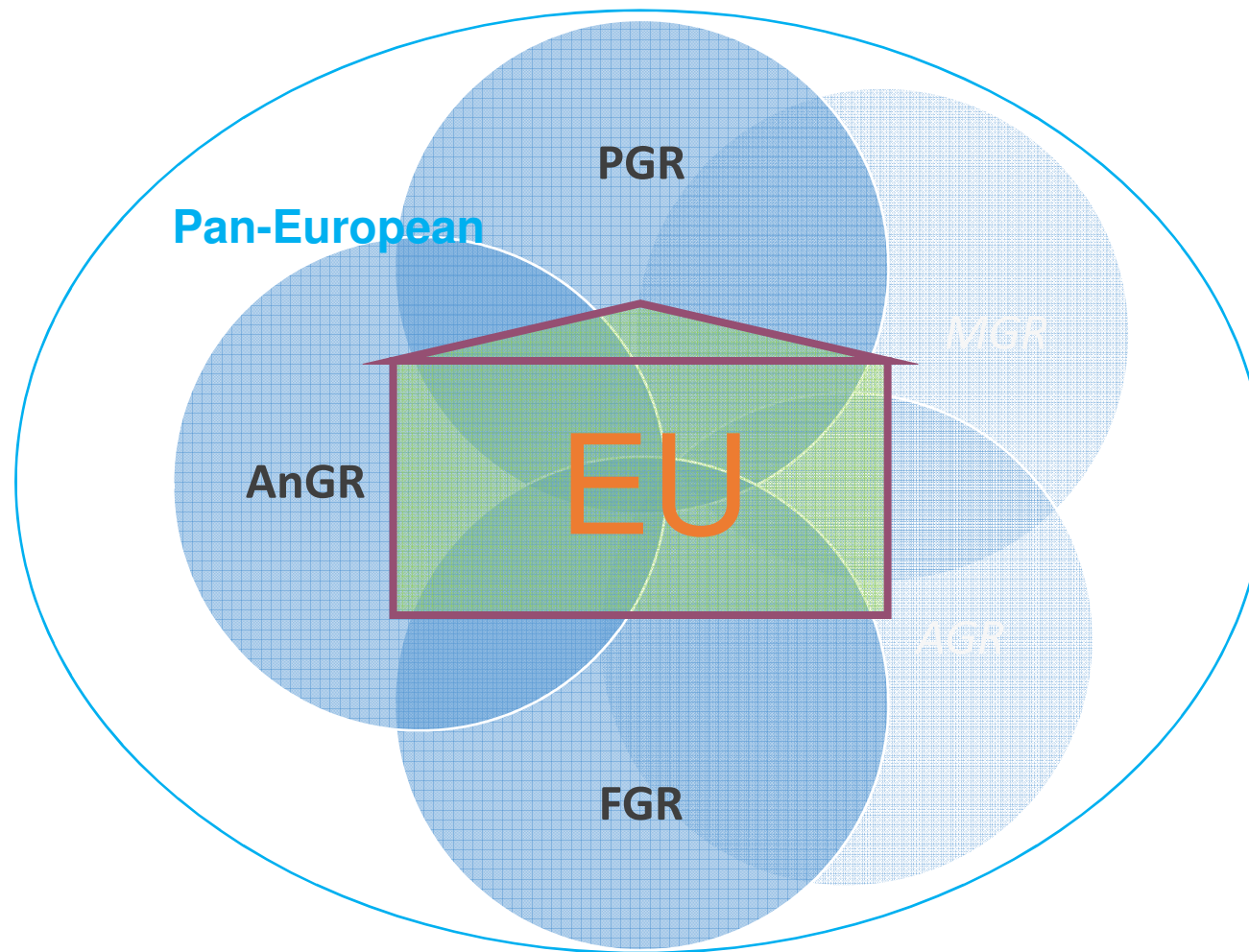


## Support and role of the ERFP network (1) – development of the Strategy

# Strategy or Strategies?

1. European GenRes Integrated Strategy for Food, Agriculture and Forestry — Main document, policy focus, max 20 pages
  2. European GenRes Strategy for Crop Genetic Resources
  3. European GenRes Strategy for Animal Genetic Resources
  4. European GenRes Strategy for Forest Genetic Resources
- } Domain specific, science focus, with policy recommendations

## European integrated strategy for genetic resources for food and agriculture



**What is needed to implement Strategy on European level?**

Prepared by the German partners of GenRes Bridge project

## Support and role of the ERFP network (2) – development of the Strategy

### Approach in developing the strategy:

#### Strong stakeholder dialogue

- production of media briefings, strategy summaries, promotional talks, online surveys and feedback
  - workshops for stakeholders outside the project partnership
  - involvement of the External Advisory Board?!
- 
- **validation by ECPGR, EUFORGEN and ERFP governing bodies**

## Support and role of the ERFP network (3) – development of the Strategy

# Possible structure of the strategy?

(not agreed yet, our position/opinion?)

### ➤ One main document:

1. European Strategy “Agrobiodiversity” (main document)

### ➤ Three sector specific documents:

2. Programme for Plant Genetic Resources  
(for Food and Agriculture)
3. Programme for Animal Genetic Resources (for Food and Agriculture)
4. Programme for Forest Genetic Resources

# Draft Table of Contents - main document (1)

## 1. Introduction

Explain the need to develop an EU Strategy “Biodiversity for Food, Agriculture and Forestry” to be complementary to the existing EU Biodiversity Strategy due to the importance of food, agriculture and forestry throughout Europe

## 2. Significance, endangerment and use of genetic resources for food and agriculture

2.1 Overarching context (e.g. species distribution, centre of diversity, etc.)

2.2 Global challenges (e.g. climate change, global population growth, food security, etc.)

2.3 ....

# Draft Table of Contents - main document (2)

## International Political Framework

3.1 UNEP / CBD

3.2 FAO / CGRFA

3.3...

## Existing frameworks

2.1. EU

2.1.1 EU Biodiversity Strategy

2.1.2 EU Agricultural Policy

2.1.2 ...

2.2. Pan-European

## Draft Table of Contents - main document (3)

5. **Sector specific programmes** (*short summary and reference to three separate documents on sector specific programmes: PGR, AnGR, FGR*)

### 6. Policy recommendations and implementation

6.1 Legal / formal EU framework needed (link to FAO, CGRFA, ITPGRFA, CBD, etc.) with targets FAO-GPA, SDG, EU

6.2 role of national strategies and programmes and added value at European level

6.3 role of ECPGR, ERFP, EUFORGEN

6.4 ....



# Domain specific – AnGR (1)

(example from Germany)

## Table of Contents (Draft)

### **1. Significance of Animal Genetic Resources, review and strategic framework conditions**

1. Introduction
2. Definition of terms
3. Significance of Animal Genetic Resources and review
  1. Description, parameters and trends
  2. Implementation of the previous programme
4. Strategic framework conditions
  1. Legislative framework
  2. International agreements
  3. National strategies

### **2. Characterisation, monitoring and documentation**

1. Characterisation and documentation
2. Monitoring and risk assessment
3. Development of international standards

## Domain specific – AnGR (2)

(example from Germany)

### 3. Sustainable use and breeding

1. Sustainable breeding programmes
2. Further development of production systems
3. Conservation of traditional production systems
4. Animal Genetic Resources in landscape maintenances

### 4. Conservation

1. On farm-conservation
2. Gene bank (*Ex situ in vitro*-conservation)
3. *Ex situ in vivo*-conservation
4. Transboundary breeds



## Domain specific – AnGR (3)

(example from Germany)

### 5. Development of framework conditions

1. Strategies and legislations
2. Advisory board for Animal Genetic Resources
3. Prevention of animal epidemics
4. Research and Development, professional education
5. International cooperation
6. Support
7. Information and public relation

### 6. Annex

Currently the programme for AnGR is being revised. The old programme was adopted in 2003. The new programme is based on the GPA for AnGR of 2006.

EU Biodiversity Strategy  
(DG Environment)

EU

**EU Strategy “Biodiversity for Food and Agriculture”**  
**DG Agriculture and Rural development**

**EU Programme  
Plant Genetic  
Resources**

- In situ conservation of CWR
- Ex situ conservation
- On farm management
- Sustainable use
- Research & Innovation
- Documentation & Bioinformatics

**EU Programme  
Animal Genetic  
Resources**

- In situ / On farm conservation
- Ex situ conservation
- Sustainable use
- Research & Innovation
- Documentation & Bioinformatics

**EU Programme  
Forest Genetic  
Resources**

- In situ conservation
- Ex situ conservation
- In forest management
- Sustainable use
- Research & Innovation
- Documentation & Bioinformatics

**EU Programme  
Aquatic Genetic  
Resources\***

- In situ conservation
- Ex situ conservation
- On farm management
- Sustainable use
- Research & Innovation
- Documentation & Bioinformatics

**EU Programme  
Microbial Genetic  
Resources\***

- In situ conservation
- Ex situ conservation
- Sustainable use
- Research & Innovation
- Documentation & Bioinformatics

National Programmes implemented by Member States

\* Not part of GenRes Bridge, but strategy should be extendable for other GRFA

EU Biodiversity Strategy  
(DG Environment)

EU

### EU Strategy “Biodiversity for Food and Agriculture” DG Agriculture and Rural Development

#### EU Programme Plant Genetic Resources

- In situ conservation of CWR
- Ex situ conservation
- On farm management
- Research & Innovation
- Documentation & Bioinformatics

#### EU Programme Animal Genetic Resources

- In situ / On farm conservation
- Ex situ conservation
- Research & Innovation
- Documentation & Bioinformatics

#### Existing elements for EU AnGRFA Programme:

- EU EAFRD & EIP-agri
- EU zootechnical legislation
- CAP
- Horizon 2020
- EFABIS
- EUGENA

#### Missing elements

- Legal / formal EU framework (link to CGRFA, CBD, ERFP, etc.) with targets FAO-GPA, SDG, EU
- Formalized EU research infrastructure (EUGENA, EFABIS etc.)
- Co-funding of national activities for regional activities

National Programmes implemented by Member States



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*Thank you for your attention!*