

Wednesday, 14 August 2019

Mr. Fernando Tejerina  
Chair of the Ex situ conservation working group

### Report of Ex situ conservation ERFP working group

#### 1. Objectives of the group (Summary)

The three main aims of the WG Ex Situ are:

1. To exchange experiences and knowledge between European countries on Ex Situ conservation strategies.
2. To support the establishment, further development, efficiency and effectiveness of national gene banks for AnGR.
3. To develop the European Gene Bank Network for AnGR (EUGENA).

#### 2. Membership of the group (chair in grey)

Country	Name Member	Surname
Albania	Lumpturi	PAPA
Austria	Beate	BERGER
Belgium	Sandrine	VANDENBEMPT
Bulgaria	Valentin	GEORGIEV
Croatia	Jelena	RAMLIJAK
Czech Republic	Jana	RYCHTAROVA
France	Delphine	DUCLOS
Germany	Martina	HENNING
Greece	Katerina	SARATSI
Hungary	István	PÉNTEK
Italy	Gustavo	GANDINI
Latvia	Iveta	KLAVINA
Lithuania	Ruta	ŠVEISTIENĖ
Montenegro	Dusica	RADONJIC
Nordgen	Mervi	HONKATUKIA
Norway	Nina	SÆTHER
Poland	Ewa	SOSIN-BZDUCHA
Portugal	Rosa	PEREIRA
Romania	Livia	VIDU

Country	Name Member	Surname
Serbia	Srdjan	STOJANOVIĆ
Slovakia	Elena	KUBOVICOVA
Slovenia	Mojca	SIMCIC
Spain	Fernando	TEJERINA
Sweden	Eva-Marie	STÅLHAMMAR
Switzerland	Laurène	BARMAZ
The Netherlands	Anouk	SCHURINK
Turkey	Vedat	KARAKAŞ
Ukraine	Svetlana I.	KOVTUN
United Kingdom	Sue	GOLIGHER

### 3. Activities in the past year and output/results

#### Activities in the past year and output/results

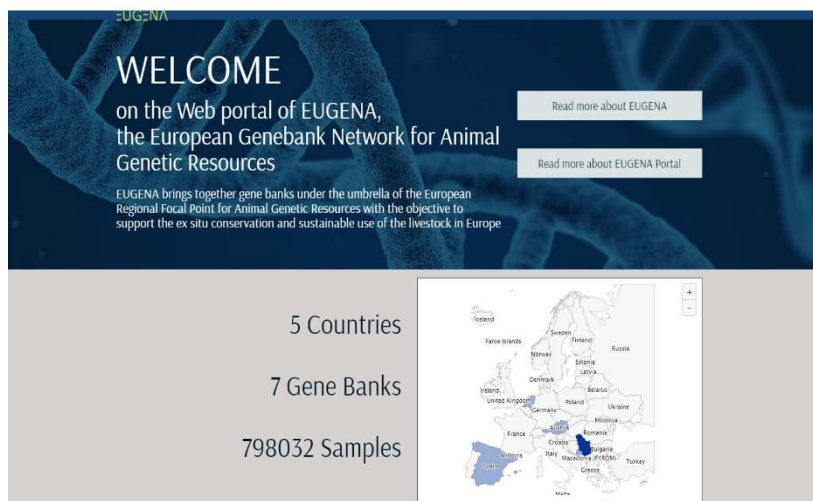
The following activities were undertaken by the WG Ex Situ and its members:

1. Development of the EUGENA network.
2. Annual meeting of the WG Ex Situ, 22 May, Madrid.
3. Development of MTA/MAA proposals in collaboration with ABS TF.

#### 1. Development of the EUGENA network.

In the past year, 2 new countries (Austria and Serbia) have signed the Memorandum of Understanding for EUGENA, increased the total number of member countries to 10: Italy, Romania, Montenegro, Slovenia, Albania, Spain, Poland, The Netherlands, Austria and Serbia.

Three new countries (Serbia, Austria and Spain) communicated gene banks which are officially recognized as EUGENA member gene banks, and five new gene banks have been added to the EUGENA portal (<https://eugena-erfp.net/en/>).



The screenshot shows the EUGENA website homepage. At the top, it says "WELCOME on the Web portal of EUGENA, the European Genebank Network for Animal Genetic Resources". Below this, it states "EUGENA brings together gene banks under the umbrella of the European Regional Focal Point for Animal Genetic Resources with the objective to support the ex situ conservation and sustainable use of the livestock in Europe". There are two buttons: "Read more about EUGENA" and "Read more about EUGENA Portal". On the left, it lists "5 Countries", "7 Gene Banks", and "798032 Samples". On the right, there is a map of Europe with several countries highlighted in blue, representing the member countries.

As consequence of the incorporation of new gene banks in EUGENA, the number of samples reached **798.032**. In the next figures or tables are presented the number of samples per gene bank (Figure 2), the number of samples per specie (Figure 3) and the samples per type of material (Table 1).

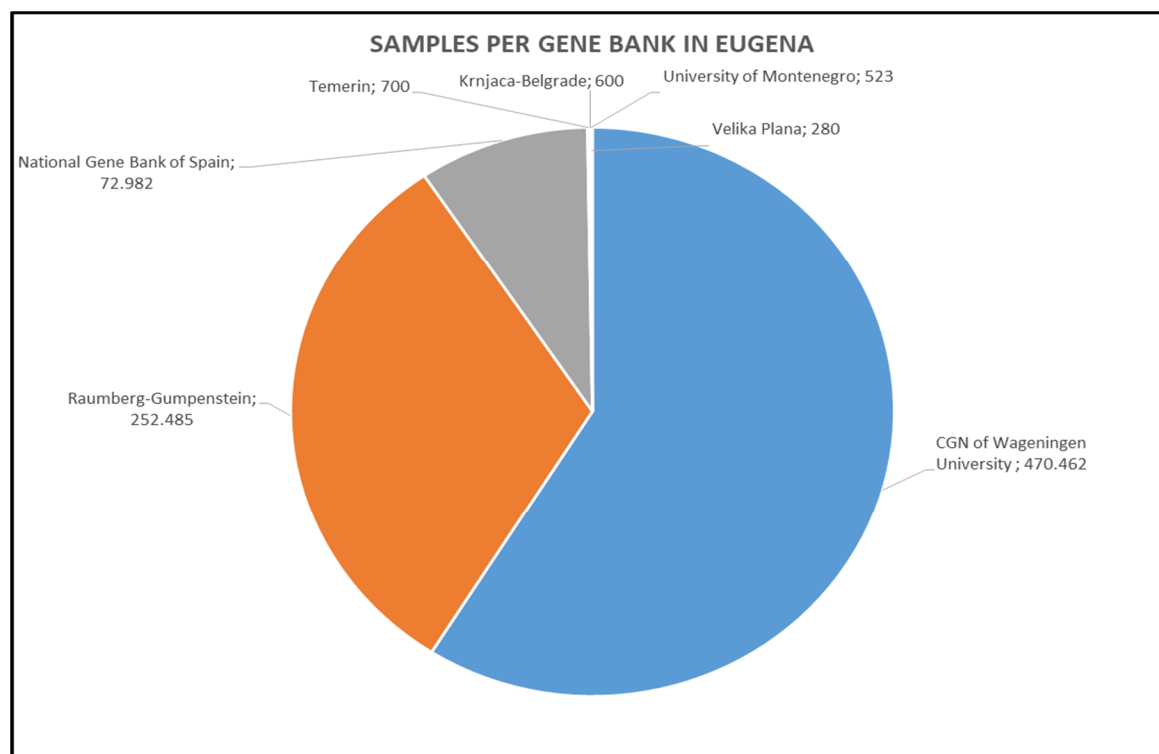


Figure 1. Samples per Gene Bank in EUGENA.

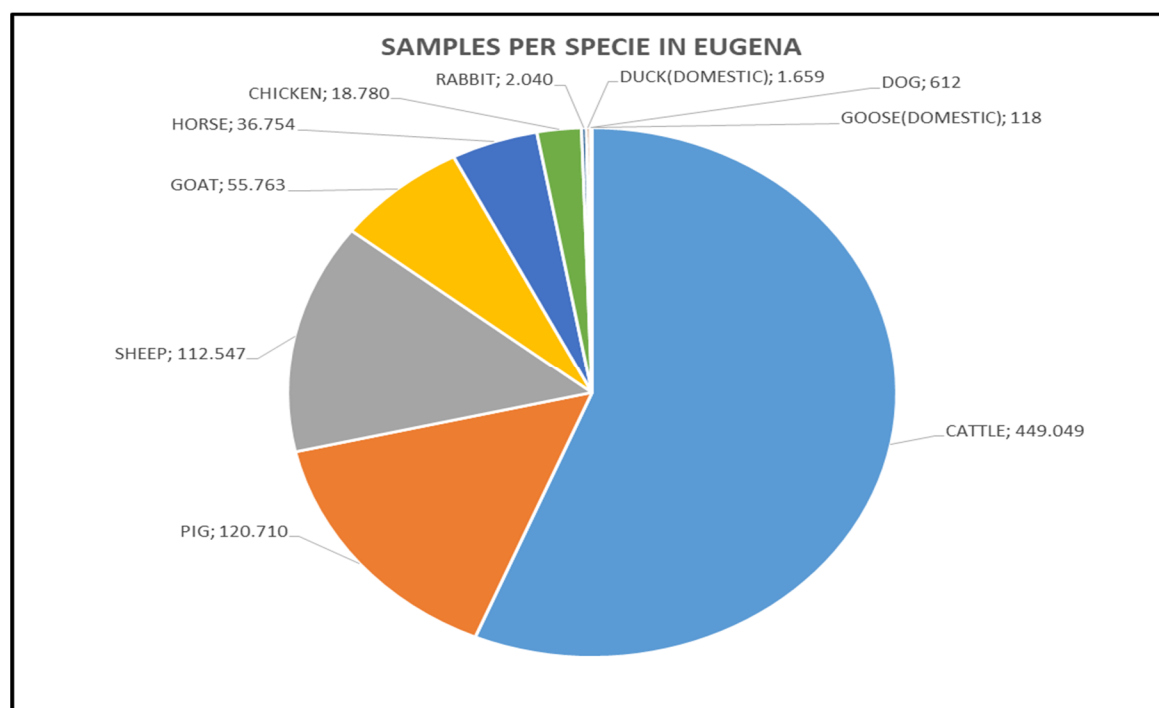


Figure 2. Samples per specie in EUGENA.

Table 1. Samples per material type.

MATERIAL TYPE	SAMPLES
Blood	1.198
Embryos	413
Hair	48
Semen	796.373
<b>Total</b>	<b>798.032</b>

The number of breeds (221) with material stored in EUGENA gene banks represented the 5% of the total number of breeds in the European Region (4.063, in accordance with EFABIS).

## 2. Annual meeting of the WG Ex Situ 22 May - Madrid

The annual meeting of the Working Group Ex Situ was held in Madrid, Spain, in conjunction with meetings of the Documentation and Information WG, In Situ Conservation WG and Task Force ABS. 16 countries were represented, either by the nominated Member of the WG or the National Coordinator. In addition, 3 guests from Spain and two invited speakers (scientists from Italy and Brazil, representing the Horizon 2020 funded IMAGE project consortium) were also present.

This meeting was chaired by Fernando Tejerina (Spain), and Jelena Ramljak (Croatia) was elected as a rapporteur. Details of the meeting and presentations can be found using the following link: <https://www.animalgeneticresources.net/index.php/event/joint-meetings-of-the-three-working-groups-and-the-abs-task-force-in-madrid/>

The first part of the meeting (morning) was dedicated to:

### a) The GenRes Bridge Project

Sipke Hiemstra introduced the topic and the main objectives of the GenRes Bridge project. Highlighted the relevance of developing a European integrated conservation strategy for the three domains (plants, animal and forest). In the development of the strategy will be mandatory to incorporate the key messages about the relevance of the ex situ conservation. A small group of experts was proposed to generate the key messages about ex situ conservation and gene banks.

The WG members will collaborate with WG Docu and Info in the collection of case studies of use of genetic resources of the three domains and in the events of the GenRes Bridge project.

b) The impacts of new regulation on movements within the Union/imports of germinal product on the ex-situ conservation (in special on transboundary endangered breeds)

The chair of the WG presented the main elements of the current veterinary regulation on the movements within the Union of germinal products, and identified the reasons because this regulation is not suitable for endangered transboundary breeds. The new proposal Commission delegated regulation establish a specific derogation for the movements of germinal products from endangered breeds between gene banks, which is an opportunity to improve the Ex situ conservation in the European Region.

The situation at national level was also analysed, the new veterinary regulation will be not applied for the movements of germinal products into the countries and each member state (MMSS), as nowadays, could establish their own rules.

In relation of the enforcement of the new veterinary regulation, a set of different options were proposed to get a friendly approach for the gene banks activities:

1. Design recommendations/guidelines to develop the procedures/regulation to authorised or recognised gene banks for germinal products moved to gene banks in another Member State.
2. Inform to MMSS that the previous authorisation/recognition could be use as LoA to enrol the gene banks in EUGENA, if the country have signed the EUGENA MoU
3. Inform MMSS and EU Commission about gene banks in EUGENA could move germinal products to others MMSS gene banks without ulterior authorisation or recognition.
4. Promote the use of EUGENA as the reference data base for the authorities in the MMSS of EU.
5. Design recommendations/guidelines to help MMSS in the procedures for the movement of germinal products between gene banks.
6. Develop recommendations/guidelines for the implement of national regulation about animal health requirements for the collection of germinal products whose destination is a gene bank.
7. Develop recommendations/guidelines for the development of Breeding Programmes by Breeders Associations of endangered transboundary breeds (Collaboration with In-situ WG and Docu and Info WG).

c) IMAGE project:

- Alessandra Stella presented the tools to upload gene bank data into the IMAGE portal.
- Rafael Silva presented a work on the Optimizing ex-situ genetic resources collections.
- Sipke Hiemstra explained two new activities of the IMAGE project:
  - o A request of DNA samples to develop a multi-species SNP array that can be used for genomic characterization of gene bank collections.
  - o A discussion paper on gene banking involving germ cells or gonads.

The second part of the meeting (afternoon) was focused in the discussion of more specific topics in relation with ex situ conservation:

d) Acquisition and Transfer policies in European gene banks.

The representatives of 10 countries (Bulgaria, Croatia, The Netherlands, France, Germany, Italy, Norway, Portugal, Spain and Sweden) presented the situation of their national gene banks in relation with the acquisition and transfer of germinal products. The main conclusions were:

- The acquisition policies of the gene banks are very diverse, and it is developed in function of the objectives and structure of each gene bank.
- The transfer policies of the gene banks are also very diverse between the gene banks.
- In some cases, gene banks have not established an acquisition/transfer policy, yet.
- In some cases, gene banks do not regulate the acquisition of the material by a MAA, the storage is made without any legal document.
- In some cases, gene banks do not regulate the transfer of the material by a MTA, the use is developed without any legal document.
- The arrangements between providers/gene banks are very diverse, in function of the different type of providers in each country (individual breeders, breeders association, companies). The ownership rights of the storage material are also very diverse between countries.
- In several countries, the role of the breeder associations is highly relevant, they collaborate in the development of the acquisition/transfer policies and procedures. In that cases is frequent the constitution of a council/committee (breeders associations, gene banks and/or government) to manage the acquisition and use of the material.
- At national level there are specific regulations which define the general elements of the Agreements for the acquisition and transfer of the material.

e) Develop of MTA/MAA proposal

The Chair presented the last proposals of MTA/MAA, the comments received in the consultation period and the main changes included into the documents, whose aim was make the documents more flexible and open, with the objective of each genebank can select the most suitable elements to built their specific MTA/MAA. The WG agreed in still working with the current version of documents in the Joint Meeting with the ABS Task Force.

f) Updating EUGENA state.

The Chair presented the current status of EUGENA: countries members, gene banks members, species, type of material and amount of material. Members of the WG Ex Situ reported about the status of signing the MoU for EUGENA including further planning of countries, and possible obstacles. A proposal of Ad Hoc Action (not approved by the Steering Committee) to support

the development of EUGENA, identify candidates EUGENA gene banks, and improve the information about the gene banks in Europe was presented by the chair. The main objective of the Ad Hoc Action is to increase the number of member countries and gene banks enrolled in EUGENA, due to a better knowledge of EUGENA between the actors of the management of the AnGR (breeder societies, reproduction centres, competent authorities, researchers) in the European Region. In parallel, the activities of the Ad Hoc Action must collect the information about the facilities where the gene banks are hosted, and this information should be registered by the ERFP in a file. The Ad Hoc Action will continue the work done within the IMAGE project *"Inventory and mapping of European animal genetic collections"*

g) Ad Hoc Action for the development of specifications for a modern gene bank documentation software.

The Chair presented the Ad Hoc Action for the development of specifications for a modern gene bank documentation software approved by the Steering Committee, by the absence of Zhivko Ducheve (Proponent of the Ad Hoc Action). The main objective of the Ad Hoc Action is review the current status of documentation of the national gene banks across Europe, will identify the information needs of the various countries in this regard, and will prepare functional specifications for an up-to-date documentation software

h) Workplan for 2019-2020.

The chair presented a proposal of Workplan for 2018-2019. After the meeting a consultation process will be open to collect comments to the proposal, and also for a prioritization of the tasks (with the exception of EUGENA development, which is the highest priority for the WG).

### 3. Development of MTA/MAA in collaboration with ABS TF.

Previously to the Madrid WG meeting a consultation process was launched to collect comments to the last proposal of MTA/MAA from the members. The comments were summarized and mostly incorporated to the documents.

The new version of the proposal MTA/MAA were analysed in the WG meeting, and the members agree in continue the discussion on these new proposal in the Joint Meeting with the ABS TF.

The attendances to the Joint Meeting Ex- Situ WG with ABS Task Force agreed a guidelines to develop a MAA (a editing work is needed to reach a final document) and the Chairs of the TF and WG are still working on MTA guidelines development.

#### **4. Plans and priorities for the next year (to be formally approved by Assembly)**

The chair presented a proposal of Workplan for 2018-2019 in the Madrid meeting, after the meeting a consultation process was opened to collect comments to the proposal. After this first step a prioritization of the task was developed by the members of the Working Group (with the exception of **EUGENA development**, which is the highest priority for the WG).

11 countries (Serbia, Poland, Czech Republic, Greece, Germany, Sweden, Slovenia, Spain, The Netherlands, France and Latvia) send their prioritization of the task, and the final result is the next:

1. Development of specifications for a modern gene bank documentation software (Ad Hoc Action).
- 2 Supporting the development of national regulation about germinal products collection intended to be kept in gene banks
- 3 Identification and recognition of gene banks at national level on the basis of the results of the Ad hoc action to develop EUGENA.
- 4 Collaboration with the IMAGE Project and follow up of its main outputs.
- 5 Sharing knowledge and expertise through the ERFP website
- 6 Collaboration with GenRes Bridge Project.
- 7 Finalizing the model of MTA/MAA for use of gene bank material in breeding, conservation and research in cooperation with Task Force ABS
- 8 Supporting the application of the new regulation of germinal products in relation with the procedure for germinal products moved to gene banks in another Member State.
- 9 Ex situ strategies for transboundary breeds in coordination with the initiatives of WG Docu and/or WG In Situ
- 10 Review of definitions relevant for EUGENA

The first priority of the WG is the development of EUGENA, and after this main task in the next year the meeting of the WG will focus in task 1, 2,3 and 4.

In addition the WG will collaborate with GenRes Bridge Project and in the ending of the model of MTA/MAA, in relation with this last task several members of the WG in the prioritization processt shown the need to finalize the models without invest more time of the WG meeting in this task.

#### **5. Other**

The WG Chair is collaborating in the design of a proposal of Ad Hoc Action to promote concerted action between countries on transboundary breeds in Europe.