

Mrs Ewa Sosin

Chair of the Ex situ conservation working group

Report of Ex situ conservation ERFP working group - 2024/2025

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	Robert	Potyka
Bulgaria	Valentin	GEORGIEV
Croatia	Jelena	RAMLJAK
Cyprus	Catalina	CABRERA
Czech Republic	Jana	RYCHTAROVA
EFFAB	Ana	GRANADOS CHAPATTE (O)
Finland	Jaana	PEIPPO
France	Delphine	DUCLOS
Georgia	Giuli	GOGOLI
Germany	Steffen	WEIGEND
Greece	Katerina	SARATSI
Italy	Gustavo	GANDINI
Latvia	Dainis	RUNGIS
Lithuania	Alma	RAČKAUSKAITE
Montenegro	Milena	DJOKIC
Norway	Nina	SVARTEDAL
Poland	Ewa	SOSIN
Portugal	Rosa	PEREIRA

Country	Name Member	Surname
Romania	Livia	VIDU
Serbia	Srdjan	STOJANOVIĆ
Slovakia	Alexander	MAKAREVIČ
Slovenia	Danijela	BOJKOVSKI
Slovenia	Tina	FLISAR
Spain	Fernando	TEJERINA
Sweden	Jane	MORRELL
Switzerland	Markus	NEUDITSCHKO
The Netherlands	Annemieke	RATTINK
Ukraine	Svetlana I.	KOVTUN
United Kingdom	Marcus	BATES

* Observer

3. Activities in the past year and output/results

- ERFP General Assembly 2024 – Firenze, Italy (August 2024) – report and workplan 2024/2025, AHA's
- EUGENA development (1 new country on board: Bulgaria; In 2025 - 3 new genebanks)
- Ex situ WG meeting 2025 – Athens, Greece – collaboration with other WG's
- Collaboration with the ERFP Secretariat and SC

a) Priorities 2024/2025 approved on last General Assembly

Workplan of Ex situ WG Activities for 2024/2025 – ranking	
Disseminate and promote the guidelines with recommendations to implement derogations for the collection, processing, storage and use of germinal products intended to be kept in genebanks. (AHA Animal Health Regulation and Genebanks)	1
Promote the incorporation of <u>the ex situ conservation activities in the breeding programs</u> of breeders societies together with in situ conservation activities	2
Development of EUGENA	2
Sharing knowledge and expertise in relation with ex situ conservation	4
Support the implementation of a modern genebank documentation software (Task Force on documentation software for genebanks)	5
Support the utilization of Quality Management Systems in Genebanks	6
Analyse the incorporation of ex situ – in vivo facilities to EUGENA, in collaboration with the in situ Conservation WG	7
Spread information about ex situ conservation and EUGENA in collaboration with the Communication Strategy of the ERFP	8

AHA's

1. Ad hoc action on specific measures for AnGR ex situ conservation in the framework of the animal health legislation. (AHA Animal Health Regulation Genebanks) - Fernando Tejerina –finished – see the specific report
2. Development of the new tools for EUGENA – Zhivco Duchevev – finished – see the specific report
3. Quality Management Systems for genebanks - Delphine Duclos- finished – see the specific report
4. Advances in semen cryopreservation in small ruminants – Jane Morrell – will be continued? – see the specific report
5. Integration of in situ and ex situ conservation approaches –Fernando &Holger& Ewa – in progress – see the specific record










b) Development of EUGENA

- ✓ 1 new country on board: Bulgaria.
 - ✓ In 2025 - 3 new genebank
- 1 from Bulgaria - Executive Agency for Selection and Reproduction in Animal Breeding,
- 2 from Spain - CENTRO DE TRANSFERENCIA AGROALIMENTARIA, Centro de Selección y Mejora del Caprino Andaluz
- ✓ new milestone reached over 5 mln samples in EUGENA database - 5336856 samples of semen, embryos, ovarian tissue, blood, DNA, hair, stem cells, primordial germ cells.
 - ✓ Update of information in the EUGENA webpage.
 - ✓ 3rd SB EUGENA meeting in Olsztyn, Poland 11-13 Sept connected with the meeting of Society of Low Temperature Biology
 - ✓ Further development of EUGENA collaboration -----GENOPHENIX
 - ✓ AHA Development of the new tools for EUGENA – Zhivco Duchevev -

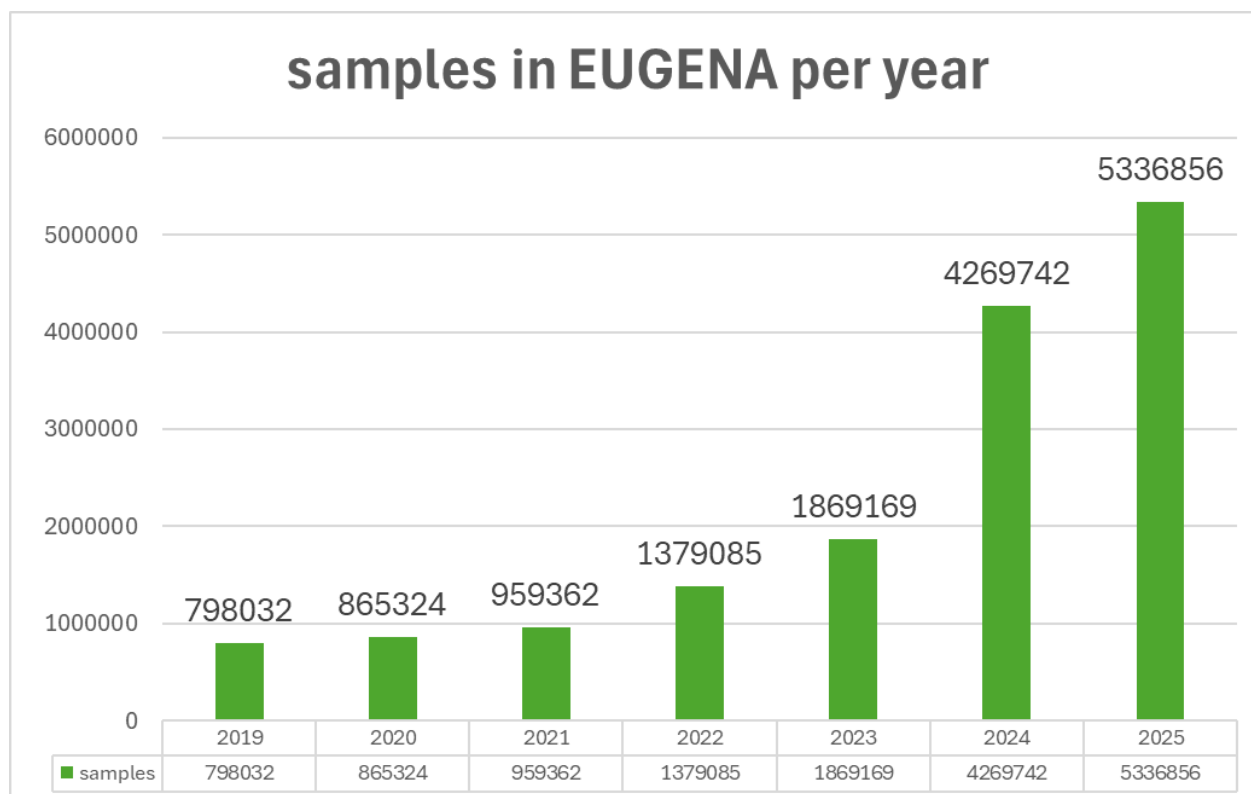


Bulgaria enrolled in EUGENA this year and the total number of countries involved in the network is 15: Italy, Romania, Montenegro, Slovenia, Albania, Spain, Poland, Portugal, The Netherlands, Austria, Serbia, Latvia, Slovakia, Hungary, **Bulgaria**.

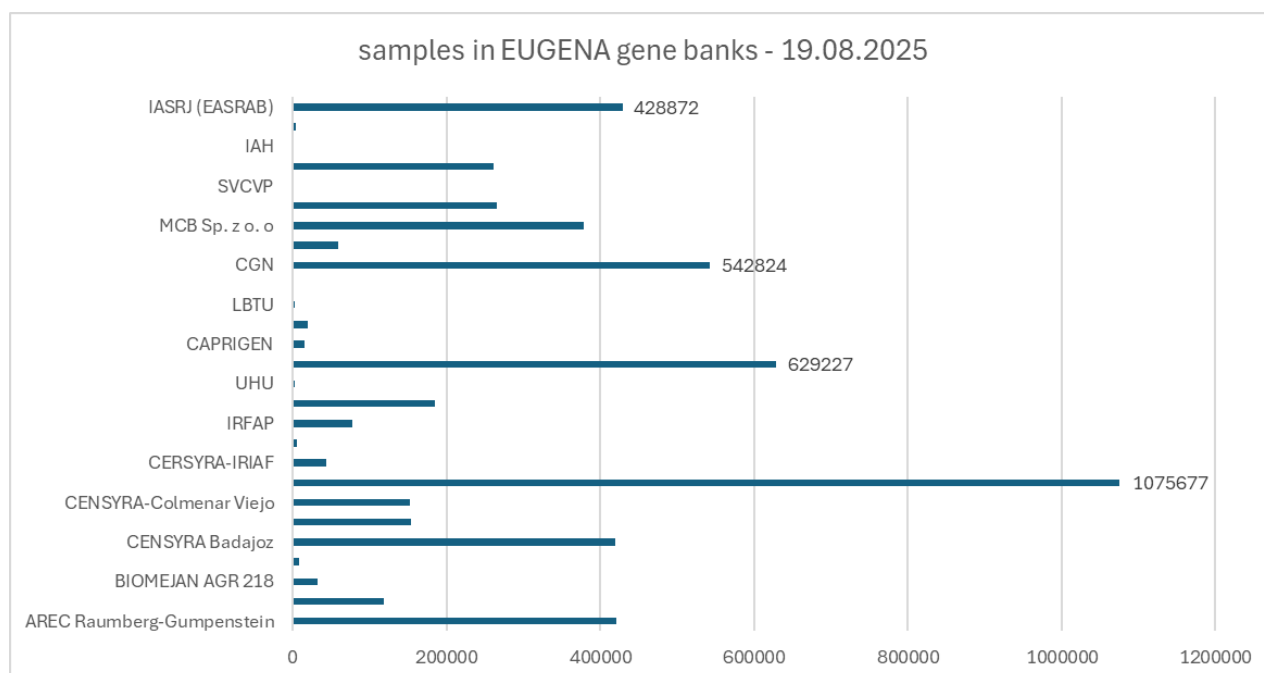
Table. Gene Banks, Species, Breeds, and Germplasm Collections in EUGENA network

Country	Number of Gene Banks	Species	Breeds	Samples	Germplasm material types
 Albania	0	0	0	0	0
 Austria	1	4	45	414595	1
 Bulgaria	1	2	32	428872	1
 Hungary	1	10	33	19413	5
 Italy	0	0	0	0	0
 Latvia	1	5	12	5693	3
 Montenegro	1	3	8	568	2
 Netherlands	1	11	159	547591	5
 Poland	2	3	15	438120	2
 Portugal	1	7	44	299960	3
 Romania	0	0	0	0	0
 Serbia	3	4	18	263827	3
 Slovakia	1	6	16	4369	3
 Slovenia	0	0	0	0	0
 Spain	14	8	125	2913848	3

Spain, the Netherlands, and Austria maintain the largest collections.



The chart shows a steady increase in the number of samples stored in EUGENA, rising from about 800,000 in 2019 to over 5.3 million projected in 2025. The sharp growth after 2023 results from the inclusion of several Spanish gene banks into the network.



Source: Eugena webpage access from 19.08.2025

The information of the new genebanks (contact data and samples) had uploaded in the EUGENA webpage.

The EUGENA activities are coordinated by the Steering Board, which consists of a genebank representative per Member Country (one person per country) nominated by the NC. The Steering Board is supervised by the ERFP Assembly and assisted by the ERFP Working Group on Ex situ conservation.

The third EUGENA Steering Board meeting will take place in person in Poland (Olsztyn) on 11-13 of September 2025. It will be joint meeting with the Society of Low Temperature Biology (SLTB) which was founded in 1964, with the purpose of promoting research into the effects of low temperatures on all types of organisms and their constituent cells, tissues and organs. The three-day program, hosted by the National Research Institute of Animal Production together with the Institute of Animal Reproduction and Food Research, begins with a visit to the Popielno Research Station to explore ex situ in vivo facilities, EUGENA updates, and discussions on incorporating such resources into the network. The second day focuses on fish cryoconservation in a joint session with SLTB, featuring plenary and thematic lectures, an excursion to the InLife bank of genetic resources, as well as presentations of new EUGENA tools and strategic discussions. The third day is dedicated to avian biodiversity conservation, with lectures on advances in semen and germ cell cryopreservation, updates on ex situ strategies for sustainable development, and a closing discussion panel.

March, 2025 – Letter of support to GenoPhenix which now includes the whole EuroFAANG consortium and its objectives.

- Biobanking services: EUGENA gene banks could act as mirror sites for EuroFAANG biobanks
- Sharing protocols, particularly to improve cell viability of cryoconserved germplasm or in relation with the legal status of the material in the collections
- Training activities for data and metadata standards
- Phenotyping local breeds
- Communicating on each other: one improves the notoriety of the other
- Joining different users' communities across a large number of countries
- Sharing expertise in the development and operation of databases for genebanks.

c) Annual meeting – Athens -7-8th May 2025

The issues of the **ex situ WG meeting agenda** were:

1. Inform on activities of the WG in the last year.
2. Updates on the status and recent activities of EUGENA, as well as country perspectives on joining the network
3. Report the AHA's : new tools on the EUGENA webpage, advances in semen cryopreservation in small ruminants, outcomes from the Software Database, and the self-assessment tool for quality management in livestock gene banks
4. Discuss the regulations: guidelines for developing national animal health regulations for material intended for gene banks, amendments in Polish legislation on ex situ conservation, and a general discussion on regulations supporting conservation
5. Share information on Institutional mechanisms: acquiring material from rare breed bulls for the Polish NBBM, and integration of in situ and ex situ conservation approaches
6. Discuss the Country approaches to ex situ in vivo and in situ conservation, and discussion on incorporating ex situ in vivo facilities into EUGENA

Joint session of all three WGs

The discussion emphasized the global and regional context of AnGR conservation, with a focus on transboundary breeds, the Global Plan of Action, and the Third Report on the State of the World's AnGR. The key outcome was the recognition if the need for stronger coordination and shared responsibility across countries to safeguard genetic diversity

Ex situ + doc info WG

The joint work underlined the critical role of improving data quality and transparency, particularly in DAD-IS reporting. Participants stressed that better documentation and common standards for ex situ management, especially for transboundary breeds, are essential for building trust and comparability across gene banks.

Ex situ + in situ WG

The session highlighted the strategic need to integrate ex situ and in situ approaches into a complementary system. By aligning institutional mechanisms, scientific tools, and awareness-raising activities, participants agreed that a coherent European framework is needed to reinforce the effectiveness and visibility of conservation efforts

The presentations of the meeting can be downloaded from:

<https://www.animalgeneticresources.net/index.php/event/erfp-working-groups-joint-meetings/>

<https://www.animalgeneticresources.net/index.php/event/erfp-working-groups-athens-ex-situ/>

d) Collaboration with ERFP Secretary and SC

- the dissemination of information and knowledge (about ex situ conservation activities) in the ERFP Webpage and social media.
- evaluation and update of the ERFP actions indicated in the action plan related to the European AnGR Strategy – virtual meeting – 18th of June 2025

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

Sixteen countries (Germany, France, Lithuania, Poland, Serbia, Slovenia, Spain, The Netherlands, Norway, Latvia, Croatia, Hungary, Ukraine, Switzerland, Italy, Portugal) sent their ranking for the tasks, and the final result is the next:

Workplan of Ex situ WG Activities for 2025/2026 – ranking	
Promote the incorporation of the ex situ conservation activities in the breeding programs of breeders societies together with in situ conservation activities (AHA in situ/ex situ integration)	1
Disseminate and promote the guidelines with recommendations to implement derogations for the collection, processing, storage and use of germinal products intended to be kept in genebanks. (AHA Animal Health Regulation and Genebanks)	2
Sharing knowledge and expertise in relation with ex situ conservation.	3
Development of EUGENA.	4
Spread information about ex situ conservation and EUGENA in collaboration with the Communication Strategy of the ERFP.	5
Analyse the incorporation of ex situ – in vivo facilities to EUGENA, in collaboration with the in situ Conservation WG.	6
Support the utilization of Quality Management Systems in Genebanks	7
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Proposal of new AHA's ?

No	working title	leader	countries interested
1	ex situ in vivo	Zhivko and ?	UK, PL, CRO,FI
2	cryotechnics - poultry (roosters)	Jaana?	FI, PL, DE, HU, NL, FR
3	cryotechnics- small ruminants - II	Jane ?	SE, DE, CRO, FR,FI, PL
4	AHA for genomic data	AnneMieke	NL, PL; DE,FI