

2025
December

NEWSLETTER



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ON THE PROGRAMME FOR THIS NEWSLETTER



ERFP General Assembly 2025
August 23th/24th
Innsbruck, Austria



Reports from the
Working Groups



Workshop on small ruminant
semen cryopreservation



FAO report



The ERFP Steering
Committee



Upcoming Events
in 2026

ERFP GENERAL ASSEMBLY 2025

AUGUST 23TH/24TH
INNSBRUCK, AUSTRIA



PRESENTATION OF LIVESTOCK FARMING IN TYROL

The ERF general assembly in Innsbruck provided an opportunity to gain a detailed overview of the livestock sector in Tyrol and Austria.

Tyrol is home to 10,618 registered animal farms, of which 2,232 are certified organic—representing 9.3% of organic animal farms nationally. Despite covering just 15% of Austria's land, Tyrol hosts a disproportionately high share of key livestock activities:

- 20.4% of Austria's dairy cow farms
- 21.3% of the national sheep population (83,619 animals)
- 22.2% of goats (21,476 animals)
- 26% of all Alpine pastures in Austria

Alpine grazing remains central to Tyrolean farming: over 108,000 cattle, 61,000 sheep, and 7,000 goats spend summer months on high-altitude pastures.

The data underscore how small-scale, pasture-based systems in Tyrol play an outsized role in Austria's animal genetic resource landscape—especially for hardy, locally adapted breeds like Tux-Zillertal cattle, Original Braunvieh, and Haflinger horses, all showcased during the alpine excursion.

Original Braunvieh



Haflinger horses



Tux-Zillertal cattle



THE ERFP ACTION PLAN REVIEW

1 ACTION PLAN STRUCTURE

The European Strategy for Animal Genetic Resources (AnGR) Action Plan is divided into two main chapters, totaling 41 actions:

- Chapter 2: Conservation and Sustainable Use (26 items): Covers Monitoring, Characterization, Performance Recording (5 items); Sustainable Use and Genetic Improvement of AnGR (4 items); and Conservation of AnGR (17 items).
- Chapter 3: Policies, Institutions and Capacity Building (15 items): Covers Policy and Legal Framework (5 items); Actors, Stakeholders and Institutions (4 items); Education and Awareness Raising (4 items); and Long-Term Funding of the strategy (2 items).

2 REVIEW PROCESS

The review took place in 2025.

- The Steering Committee (SC) met twice (April 25th and May 14th, 2025).
- One virtual meeting was held by the Working Groups (WG).
- The opinions of the SC and WG members were collected in an ad hoc column of an Excel file.

3 MAIN OUTCOMES AND PROGRESS

The report concludes that progress is being made in the strategy's implementation.

- Effectiveness of Ad Hoc Actions (AHAs): AHAs have been quite effective in tackling certain issues, including Monitoring (linked to Z. Ducheve's work), Communication (AHA outcomes for awareness), and recent Ex situ/In situ actions.
- EURC EAB Role: The implementation of the EURC EAB also helped to achieve some deliverables.

4 MAIN NEEDS FOR IMPROVEMENT

- Policy: Better follow-up of the Genetic Resources (GR) strategy for the Europe region is needed.
- Funding: There is a lack of calls for research on genetic resources at the EU level.



REPORTS FROM THE WORKING GROUPS

ANNUAL REPORT OF THE *IN SITU* WORKING GROUP

The Working Group on *In Situ* Conservation and Valorisation of AnGR (Animal Genetic Resources) has the overall goal of **improving *in situ* (on-farm) conservation and valorisation of AnGR** to provide a base for their sustainable use.

Core mission and scope

- **Conservation and sustainable use:** to improve on-farm conservation to provide a base for the sustainable use of AnGR.
- **Support for Transboundary Breeds:** to support on-farm conservation efforts for transboundary breeds (those present in several countries).
- **Valorisation:** to promote the utilisation of rare breeds and identify "added value" arguments (e.g., cultural heritage, ecosystem services, local marketing) to relevant stakeholders

Key areas of action

- **Regulatory framework:** to review legal conditions and financial support measures to optimize their implementation in *in situ* conservation strategies. This includes working on the inclusion of AnGR management and conservation in national legislations.
- **Information exchange:** to exchange experiences on different initiatives and share information among countries about implemented and planned on-farm conservation activities, success stories, and projects.
- ***In Situ/Ex Situ* Integration:** to elaborate and promote approaches for better integration of *in situ* and *ex situ* conservation activities in Europe, in collaboration with the *Ex Situ* Working Group.
- **Concept Clarification:** to work on how *In Situ* conservation is understood in different countries.

Strategic Collaborations

- **ERFP Working Groups (WG):** holds joint meetings with the WG Documentation and Information (on transboundary breeds and breed risk status assessment) and the WG *Ex Situ* Conservation.
- **EURC-EAB:** provides input to and exchanges with EURC-EAB for further work on *in situ* related topics (including breed risk status assessment).
- **FAO:** further observes the implementation of the Global Plan of Actions (GPA).

Survey on National Animal Genetic Resources legislation

A dedicated survey was distributed to the ERFP network in April 2025 to evaluate the integration of AnGR management and conservation into national legal frameworks, focusing specifically on regulatory provisions.

Initial results (based on 21 responses) indicate:

- **National legislation:** 18 out of 21 participating countries possess legislation that incorporates animal genetic resources.
- **Aspects covered:** conservation (17 countries) and monitoring (16 countries) are the most frequently regulated aspects, whereas sustainable use is less common (13 countries).
- **Breeds included:** conservation efforts primarily target native breeds, while monitoring activities generally cover all breeds within the country.
- **Data exchange:** although the maintenance of national databases is generally regulated, the legal obligation to exchange data with international systems such as DAD-IS/EFABIS is not regulated by law in the majority of cases (16 out of 21 countries reported No).
- **International cooperation:** legal regulation regarding participation in international networks (FAO, ERFP) is only present in 7 out of 21 countries

ACTIVITY REPORT OF THE *EX SITU* CONSERVATION WORKING GROUP

Development of EUGENA

EUGENA remains a major ongoing initiative.

- **Network expansion:** Bulgaria has officially joined EUGENA, increasing the total number of involved countries to 15. Participating countries include: *Italy, Romania, Montenegro, Slovenia, Albania, Spain, Poland, Portugal, The Netherlands, Austria, Serbia, Latvia, Slovakia, Hungary, and Bulgaria.*
- **New collections:** three new genebanks were added in 2025, raising the total number of collections from 24 to 27.
 - One new genebank originates from Bulgaria (Executive Agency for Selection and Reproduction in Animal Breeding)
 - Two new genebanks originate from Spain (Centro de Transferencia Agroalimentaria and Centro de Selección y Mejora del Caprino Andaluz)
- **Samples:** the total number of samples has demonstrated a significant increase, rising from 4,269,742 in 2024 to 5,336,856 in 2025, thus exceeding 5 million samples.

Workplan 2025/2026

The principal priorities for the upcoming period are:

1. To promote the integration of *ex situ* conservation activities into both breeding and *in situ* conservation programmes
2. To disseminate and promote the guidelines to support gene banks and animal health legislation
3. To facilitate the sharing of knowledge and expertise related to *ex situ* conservation
4. To continue the development of EUGENA

Collaborations

Significant collaborations have been established with other key European networks.

- **EuroFAANG:** this is an initiative that consolidates several Horizon 2020 projects (e.g., GEroNIMO, AQUA-FAANG, BovReg, etc.).
The collaboration was officially approved by the EUGENA steering board and subsequently authorised by the ERFP steering committee. Two specific collaboration models were proposed:
 - the reciprocal exchange of information
 - the integration of individual EUGENA genebanks into the EuroFAANG biobank network
- **GenoPhenix:** this is a European research infrastructure designed to deliver services focused on genome-phenome interactions. Potential avenues for collaboration include utilizing EUGENA genebanks as mirror sites for EuroFAANG biobanks, sharing critical protocols, implementing training activities, and exchanging expertise in the development and operation of specialized databases.

ACTIVITY REPORT OF THE DOCUMENTATION AND INFORMATION WORKING GROUP

Plans and priorities
2026

The core function of this group is to maintain and enhance the information systems for animal genetic resources in Europe, specifically EFABIS and the global FAO DAD-IS system.

Key achievements 2025

Data quality and EFABIS

- A proposal for the annual publication of key figures is currently being prepared to promote the work and visibility of the ERFP.
- **Major challenge:** discussions highlighted the limitations encountered by countries in data updating. Currently, 70.0% of data regarding breed completeness is classified as "not finished."

Indicators and EURC collaboration

- Collaboration with the European Union Reference Centre (EURC) has been strengthened to define and develop indicators used to monitor the status of endangerment of animal genetic resources (AnGR).
- A joint ERFP and EURC expert group was established to review and propose indicators aimed at assessing the endangered status of the breeds.

Interoperability and EUGENA

- The finalization of the "new web tools" (AHA) within EUGENA has been completed.
- Interoperability between the EFABIS and EUGENA databases has been enhanced.

Transboundary breeds

- An article detailing the work of the Task Force on Transboundary breeds and its links with the In Situ Working Group was finalized, submitted, and accepted for publication by the journal Genetic Resources (GenRes).

Improvement of data quality (EFABIS/DAD-IS)

- Organization of regular virtual workshops to train and share best practices on the use of DAD-IS (creating "DAD-IS Champions")
- Hosting a virtual meeting dedicated to geographical data

Indicators and threats

- To develop and implement indicators for monitoring the status, trends, and threats to AnGR conservation, in close collaboration with the EURC.

Genomics and phenotypic data

- To promote the exchange of data for the genomic and phenotypic characterization of AnGR
- To collect information on breeds included in genomic projects.

Support for EUGENA and interoperability

- To support the EUGENA network by incorporating information from ex situ in vivo genebanks
- To enhance interoperability between population and genebank data with other relevant databases

Upcoming Events

- Preparation of a second seminar with the EAAP Mediterranean working group (EAAP-WG Med) in 2026

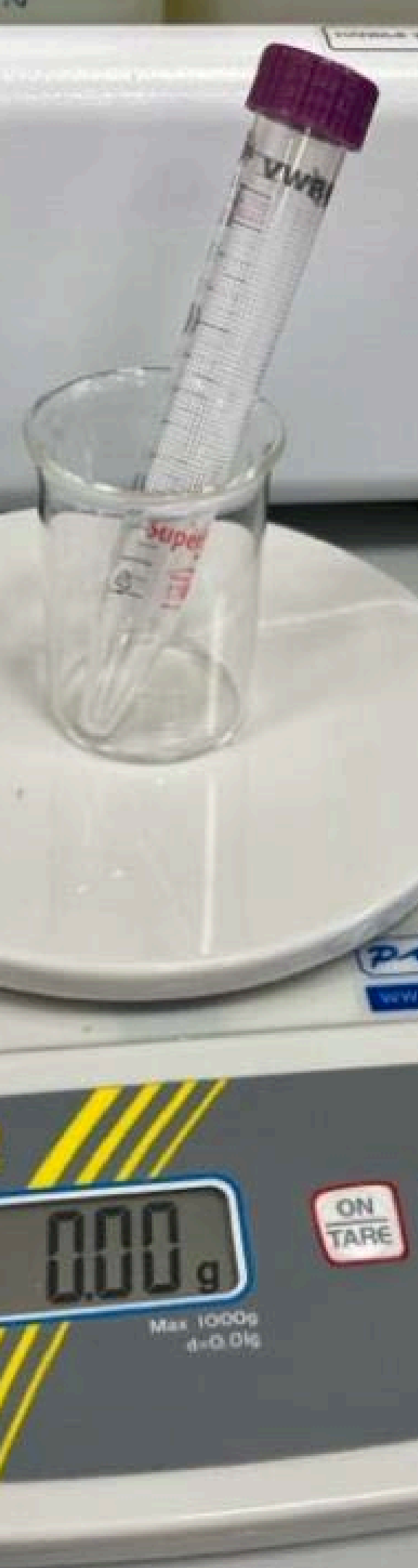
ERFP Ad Hoc Action

WORKSHOP ON SMALL RUMINANT SEMEN CRYOPRESERVATION

10 June 2025

This event gathered experts from various European countries to discuss the advancements, established protocols, and specific challenges related to semen cryopreservation in small ruminants (sheep and goats). This technique is crucial for the *ex situ* conservation of Animal Genetic Resources.





REPRODUCTIVE BIOTECHNOLOGIES IN NATIVE SHEEP IN THE CZECH REPUBLIC

The work aims to optimize Artificial Insemination (AI) methods and enhance the cryosurvival of spermatozoa from livestock.

Conservation of Native Genetic Resources

The Czech Republic maintains a national programme for the conservation of plant, animal and microbial genetic resources.

- **Sheep resources:** the focus is notably on the Wallachian Sheep. In 2024, this breed comprised 1,095 animals distributed across 56 flocks. The Wallachian Sheep is valued for its ability to utilize poor mountain pastures and for the production of traditional cheeses.
- **Goat resources:** Czech goat genetic resources, such as the Brown Short-Haired Goat are also targeted.

The Czech Cryobank

The national centre for animal genetic resources (NÁRODNÍ CENTRUM pro genetické zdroje zvířat) manages the cryobank.

Breed	Number of sires	Number of doses (IDs)
Wallachian Sheep	15	283 IDs (360 additional IDs planned in 2025)
Sumava Sheep	58	1,116
White Short-Haired Goat	17	1,597
Brown Short-Haired Goat	10	304

Artificial Insemination (AI) trials

The program includes the AI of native sheep using cryopreserved semen:

- **Methods:** the methods considered include laparoscopic AI and intra-cervical AI.
- **First field trial:** an initial double intra-cervical AI trial was conducted on 30 synchronized Wallachian ewes. The resulting lambing rate was 3 out of 30.

Research on cryopreservation and sperm quality

The study focuses on optimizing protocols for semen cryopreservation (freezing and thawing).

- **Poor prediction:** pre-freezing sperm motility is a poor indicator of its ability to survive after thawing in rams.
- **Comparative results:** motility and viability are better in goats (White Short-Haired Goat: Motility 24.1%, Viability 32.3%) than in rams (Wallachian Sheep: Motility 10.3%, Viability 17.2%).
- **Critical discovery:** the Propidium Iodide (PI) viability test carries a 6% risk of false positives. This marker enters the sperm cell through active pannexin channels, not only through a damaged membrane.

CURRENT STATUS, CHALLENGES, AND PERSPECTIVES OF CRYOPRESERVATION FOR CROATIAN AUTOCHTHONOUS SHEEP BREEDS

The work detailed here aims to summarize the current status, challenges, and future goals regarding the use of cryopreservation for Croatia's native sheep breeds.

Context:

- 01
- Ex situ conservation:** cryopreservation is an essential tool for the ex situ conservation of Animal Genetic Resources, functioning as an "insurance policy" against the irreversible loss of genetic diversity.
- 02
- Assisted reproductive technologies (ART):** ART, which encompasses cryopreservation, is widely utilized in research, commercial laboratories, and breeding programs for commercial and laboratory animals. However, its practical application remains limited for many autochthonous breeds.
- 03
- Croatia and AnGR:** conservation efforts in Croatia focus on several endangered sheep breeds, including the Rab, Lika, and Cres sheep, as well as the Croatian Alpine and Balkan goats.

Challenges of cryopreservation

The use of frozen/thawed semen is challenging due to significant **variability across individuals and breeds** and **low post-thaw viability** (typically <30% motility). Therefore, **specific protocols** are required for each breed, and **intra-uterine Artificial Insemination (AI)** is often needed to achieve acceptable fertility rates, as cervical AI results are highly variable (0–40%).

Croatian case studies (Sheep Breeds)

Cryopreservation efforts have been implemented for several Croatian sheep breeds:

Sheep Breed	Cryopreservation status	Specific challenges
Rab Sheep (Rabska ovca)	Semen collected and frozen.	Critically endangered breed, necessitating rigorous lineage management.
Lika Sheep (Lička pramenka)	Semen collected and frozen.	Low population size, requiring an increased number of lineages to be represented in the cryobank.
Cres Sheep (Creska ovca)	Semen collected and frozen.	Very good pre-freezing sperm quality, but a significant reduction in post-thaw motility is observed.

Future Perspectives

The overarching goal is to enhance the effectiveness of AnGR conservation and utilization in Croatia:

- Networking:** develop a robust network for education and collaboration involving breeders and technical experts.
- Reproductive Improvement:**
 - decrease incidence of infertility, abortions, and neonatal losses
 - increase the number of lambs born from endangered lineages and valuable sires
 - achieve better organization and control over the mating and reproduction of Croatian autochthonous breeds
- Training:** increase the number of field experts trained in ovine reproductive pathology and in the use of ART as a support tool.



[1/2] REINDEER – APPLICATION OF ASSISTED REPRODUCTIVE TECHNOLOGIES (ART) FOR IN VITRO GENETIC CONSERVATION

Context and objective

- **Importance of conservation:** the reindeer is a significant species. The application of ART is being studied to preserve its genetic material, specifically through sperm cryopreservation.
- **Methodology:** this work relies on sperm cryopreservation experience gained with other cervids (Red deer, Fallow deer, Argali). The objective is to adapt existing protocols to reindeer.



Cryopreservation protocol

The sperm cryopreservation process, as applied to reindeer, follows these key steps:

- **Collection:** sampling is often performed post mortem from the testes or epididymis.
- **Transport:** transfer of testes to the laboratory (slow cooling to room temperature).
- **Sperm preparation:**
 - sperm washing
 - concentration assessment (using a colorimeter)
 - dilution (typically to 100 million/ml)
 - equilibration
- **Freezing:** filling of straws and freezing in liquid nitrogen
- **Storage:** storage in liquid nitrogen
- **Quality Control (QC):** assessment of motility and viability staining before freezing, followed by post-thaw quality control.



[2/2] REINDEER – APPLICATION OF ASSISTED REPRODUCTIVE TECHNOLOGIES (ART) FOR IN VITRO GENETIC CONSERVATION

Research and key results

Research related to cryopreservation included morphometric analyses and studies on intra-male variation:

- **Flow cytometry:** studies were conducted to determine post-thaw sperm viability.
- **Sperm head morphometry:**
 - imageJ analysis was used to measure the surface area of sperm heads
 - these studies demonstrate a difference in head surface area between X- and Y-bearing spermatozoa in cattle.
- **Intra-male variation:** research revealed significant variation in sperm size within individual males in polygynous mammals (mean coefficient of variation around 13% for the presented data).

Perspectives

The successful application of ART protocols for reindeer is essential for establishing a secure gene bank. It is also crucial for the long-term management of the species' genetic diversity. This work is part of a collaborative effort and expertise sharing between different institutions.



FAO report



FAO ACTIVITY REPORT ON ANIMAL GENETIC RESOURCES

MAJOR EVENTS

- **13th session of the intergovernmental technical working group (ITWG-ANGR):** held from 20 to 22 November 2024. It focused on the implementation of the Global Plan of Action (GPA-ANGR) and the preparation of the third report on the state of the world's animal genetic resources.
- **20th session of the Commission (CGRFA):** organized from 24 to 28 March 2025. It addressed cross-sectorial matters such as climate change and biodiversity for food and agriculture.

PROGRESS AND TECHNICAL TOOLS

Significant progress has been made in data management and reporting:

- **DAD-IS System:** a new geographical distribution tool was launched in July 2025. It integrates data from over 27 countries and 1011 breed populations. Updates were completed for countries with previously outdated data (e.g., China, Russia).
- **SDG report:** the tool for SDG indicator 2.5.2 on breeds at risk has been amended and is available online.
- **Third report (SoW AnGR):** the FAO received reports from 112 countries and 16 international organizations. Three draft subchapters are already available.

TRENDS AND KEY RESULTS

The analysis of the global plan of action implementation reveals concerning trends:

- **Stagnation:** since 2020, all areas (characterization, sustainable use, conservation) show stagnation or even deterioration in their implementation.
- **Funding:** funding for implementation has decreased particularly sharply.
- **Indicators:** average scores for conservation and funding dropped between 2020 and 2024.

CALL FOR ACTION AND RECOMMENDATIONS

The report outlines three concrete actions for the ERFP:

- addressing **missing national reports** from several countries (e.g., Albania, Romania, Türkiye)
- promoting **proactive engagement with National Coordinators** to improve data provision to DAD-IS
- inviting **expert review** of draft reports for accuracy

COMMISSION RECOMMENDATIONS

The commission recommended that the FAO:

- Continue to support countries in implementing the global plan of action.
- Develop a new index combining existing information in DAD-IS on cryoconserved material and demographic risk status.



The ERFP Steering Committee



RENEWAL WITHIN THE ERFP STEERING COMMITTEE

During the general assembly in August 2025, elections were held regarding the composition of the steering committee. These changes ensure both the renewal of ideas and the stability of governance for the coming years.

Departures

This session provided an opportunity to acknowledge the commitment of two outgoing members. The assembly warmly thanked **Nina Svartedal (Norway)** for her work as the North Region representative, as her term ended in 2025. Thanks were also extended to **Rachel Davis (United Kingdom)** for her contribution to the West Region.

New nominations

To maintain the work dynamic, new candidates were presented for the Steering Committee:

- **Ewa Sosin (Poland)**
- **Marcus Bates (United Kingdom)**

The ERFP congratulates the new members and thanks the outgoing members for their dedication to the conservation of animal genetic resources in Europe.

Ewa Sosin

Ewa Sosin, a PhD researcher in Poland, specializes in the **conservation of animal genetic resources** (especially cattle) and *ex situ* strategies, with over 15 years of experience.

Key roles include:

- **National:** appointed **National Coordinator for ANGR** in 2024 and Vice-Head of the national biological materials bank. She is currently working on the restoration of the "Nadbużańska Black" cattle breed.
- **European:** chair of the **ERFP Ex Situ Conservation Working Group** (since 2024, member since 2013) and Chair of the EUGENA gene bank network board.
- **Publications:** author of 125 publications and co-author of the Polish strategy for AnGR conservation (2013-2025).

Marcus Bates

Marcus Bates, a specialist in **international breeding and conservation policy**, recently retired (May 2025) to dedicate more time to the **ERFP**.

Key achievements include:

- Establishing a privately funded **gene bank for the UK's 10 native pig breeds**.
- Serving as Chair (since 2024) of the UK national steering committee for farm animal genetic resources.
- Receiving the **Marsh Award** in 2020 for contributions to genetic diversity.

UPCOMING EVENTS IN 2026





**ERFP WORKING GROUPS
SASSARI (ITALY)**

From May 18 to May 20

**GENERAL ASSEMBLY
HAMBURG (GERMANY)**

September 5 and 6

**14TH SESSION OF THE
ITWG ON ANIMAL
GENETIC RESOURCES
FOR FOOD AND
AGRICULTURE**

November



CONTACT AND PARTICIPATION

If you are actively engaged in AnGR, we encourage you to follow our activities, provide feedback and reach out to join efforts. Ask your national coordinator! Your participation in task forces or Ad Hoc actions might be crucial for advancing the objectives of each working group and the whole organization.

Stay connected with us through our social media channels and our website www.animalgeneticresources.net to keep abreast of our latest initiatives and opportunities for collaboration!

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