

Minutes of the Working Group Ex Situ Conservation

12th/13th May 2018, Zagreb, Croatia

Chair: Sipke Joost Hiemstra

Participants: see list

Tuesday, 12th June 2018; 08:30 am

Jelena Ramljak wishes welcome to all participants, and explains her situation and why she had to resign as the chair of the WG Ex Situ..

A new chair for the Ex situ WG has to be elected during this meeting, but for today's and tomorrow's session SJ Hiemstra takes over and explains the Agenda. A plan for next year (proposal for General assembly at the EAAP in August 2018 in Dubrovnik, Croatia) has to be proposed by the WG Ex Situ. One item was already raised last year (transboundary breeds) and also WG Documentation and Information and the WG In Situ proposed further work on transboundary breeds.

Introduction of participants and guests follows. 16 countries are represented either by Working Group members or NCs. There are 3 Croatian guests besides Anta Ivancović as NC. Two guess(from France and Italy) are invited speakers to supply more information from IMAGE consortium.

Martina Henning will write the minutes.

The minutes of previous WG Ex Situ group meeting in Belgrade, Serbia were approved, no extra comments from participants.

EUGENA State of signing MoU, obstacles, next steps ..to date

Sipke is asking for any news concerning signature of MoU and recognition of genebanks at national level associated with the MoU. Round the table all participants are reporting about the status from their local authorities. (analogous to the table of 2017).

Table 1. Short overview of status and obstacles in Signing MoU

Country	Status / obstacles of signing MoU
Italy, Romania, Montenegro, Slovenia, Albania, Spain, Poland, The Netherlands	Signed
Bulgaria	Signature in progress
Croatia	Signature in progress
Austria	Administration process
Latvia	Signing can be expected soon
France	National Coordinator in the process to sign

Germany	A mode is discussed, if other kind of document is needed
Greece	Monitoring in process, National Conservation Program in progress
Norway	Gene bank belongs to the farmer. Who has to sign?

In general, it can be concluded that the signing of MoU is in progress. Several countries who already signed the MoU have not formally indicated yet which gene banks at national level will become part of the EUGENA network.

Zhivko Ducheve introduces the **new EUGENA portal**:

- Single entry point of data on data of European AnGR
- Summary Country page statistics
- To allow national gene bank to present what is in their collection

The Netherlands and Montenegro are the first EUGENA member countries which became visible in the EUGENA portal (<https://eugena-erfp.net/en/>)

A map shows gene banks and the portal includes information on :

- Contact details (consent needed to put this information on portal)
- Country representative and gene bank contact persons Breeds, donor animals and samples
- Storage location(s)

Contact data can only be changed by the administrator (Zhivko).

IMAGE (1) - Genetic collection survey (as part of WP 2)

Delphine Duclos presents results of the survey on behalf of Coralie Danchin:

The survey was answered from 20 countries (61 organizations). 51 are storing germplasm collections, 30 genomic collections and 20 are holding both. There are mostly universities or other publically financed institution running gene banks (61%). Backup sites are only available in 35% of the germplasm collections.

- level of gene bank organization differs among the states
- large number of breeds all over Europe
- endangered breeds compared with commercial ones with least amount of material
- most collections in storage but not in use
- IMAGE can help to develop more dynamic gene banks
- More research needed for characterization of breeds
- Valuable genetic collections need public support

It meets the objectives of EUGENA to improve the identification of gene bank content and make the information available.

IMAGE (2)

Paul Boettcher joins us from Rome via skype and informs about another survey on quality management and quality control of gene bank collections. Besides using a survey monkey® tool which helped to get worldwide responses, Maelle D'Arbaumont (INRA) interviewed NCs and gene bank managers. The question is: Do we need an official certification (e.g. ISO 9001) for gene banks, which may be relatively expensive, or are guidelines for preventive measures and a training program for quality managers sufficient? Is material duplicated and is it possible to trace samples in a data base? Less than 40% have a specific policy for the use of material. 40 (20 from EU) responses have come in so far, deadline is Juli 1st. Final evaluation will follow.

This ended the forenoon session.

IMAGE (3)

Elisabeth Blesbois gave an insight into »Emerging reproductive biotechnologies for the conservation of geentic diversity«. She is a scientist working at INRA. She is also involved with cryobanking and initiated the French Avian National Cryobank Program.

Advanced, novel, emerging techniques in conservation of genetic diversity is freezing gonadic tissue or PGCs (primordial stem cell), in particular relevant for bird species. PGC methodology where cell from embryonic tissue are harvested and used in a gene transfor process, allows recovery of the whole genome in one generation. Disadvantage: they are invasive, expensivetechniques and may be ethically questionable in relation to conservation of genetic resources. This discussion is also part of the IMAGE WP3.

Priorities are suggested: If possible, collect semen (less invasive, less expensive) but you get only half the genome. As second option (and species dependent) invasive technique have to be applied. Another question are sanitary limitations that might overcome (or created).

EU Animal Health legislation – Update

Following the IMAGE scientific contributions a presentation by Fernando Tejerina followed where he refers to the EU Animal Health Regulation 2016/429 that means to have better control on prevention and eradication of animal diseases. A supplement to this regulation is in discussion in relation with germinal product of agricultural animals (only mammals so far) for movement of material within the EU.

For research and exchange of gene bank material derogations will possibly be granted for material which does not fulfill present EU animal health requirements, at national level and for bilateral exchange of genetic material of endangered breeds. Approval for the operator of the research center or gene bank is needed by a competent authority (veterinary office). For research purposes the material has to be labelled as “for research only” material. For gene bank all movements have to be notified to the above mentioned office, and material may only be moved within EU between gene banks.

IMAGE (4)

Another Work package in the IMAGE project deals with gene bank and genomic data bases . Alessandra Stella (Institute of Agricultural Biology and Biotechnology (IBBA) in Milan, Italy presents how IMAGE will create an “Integrated data infrastructure for gene bank collections”

The conceptual model sees e.g. as a starting point CryoWeb to send data via an Injekt Tool (hosted in Milan) into the Biosamples database of EBI (European Bioinformatics Institute – UK). Biosamples database of EBI also includes genomic/sequence data of farm animal breeds. IMAGE will develop an interface that will be able to extract gene bank and breed related genomic data from Biosamples database. This interface also needs to be linked to EFABIS/DAD-IS and the EUGENA portal. Breed ontology and harmonisation between for example DAD-IS/EFABIS and Biosamples remains a challenge.

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IMAGE (5)

In the frame of the IMAGE project the ethical committee reviewing the project have asked for some report by stakeholders on the choice of breeds and genetic material to be conserved in gene banks. This subject was already touched following Elisabeth Blesbois’ talk about ethical concerns on certain reproductive techniques.

A questionnaire was prepared by the IMAGE consortium to fill in (10 min.) on the ethical relevance in context with cryopreservation and animal experiments for increasing biodiversity or for reconstitution of breeds.

All participants of the ex situ group got 10 Minutes time to answer the questions. Sipke Hiemstra and IMAGE colleagues will evaluate the questionnaire.

Second last issue on the Agenda is the approval of a **new chair** of the ERFP ex situ group. **Fernando Tejerina** is concordantly approved by all participants.

Activities in 2018/2019

A list of proposals was introduced by Sipke and discussed:

1. EUGENA (Secretariat, Zhivko, Sipke)
 - More countries should get “on board”
 - Information about gene banks which are part of EUGENA should load gene bank data to the portal
2. Finalizing model MTA/MAA (Ela, Sipke), led by Task Force ABS
3. User Policies/access rules of gene banks have to be made more clear, consistent and comparable (Lead not decided)
4. Contact info of experts cryobiology/reproduction/gene bank on ERFP website (waiting for new ERFP website; Secretariat)

5. Sharing protocols on ERFP website (waiting for new ERFP website; Secretariat)
6. Transboundary breeds – WG Ex Situ will follow initiatives of WG Docu and WG In situ. - no specific action from this group
7. Review of definitions for EUGENA, e.g. core collection, commercial collections, duplicate collections, genomic info....; No access, restricted access, free access...
Small group will be established within Ex situ WG: Germany, Latvia, France, Spain, Italy; Martina will propose some definitions and send them to group members.
8. SDG 2.5.2 – sufficient genetic material stored - no further action now. May be discussed in the context of GenResBridge (Horizon 2020 Coordination and Support Action)
9. Recommendations for National Cryo databases.
What is needed? How to keep CryoWeb alive. Need for further development? (Zhivko)
10. IMAGE portal development and EUGENA link (Zhivko, Sipke)
11. Finding more gene banks at national level, and enhance communication at National level with help of EUGENA (Fernando).

Any Other Business

Stakeholder Dialogue in Zagreb, Croatia Aug. 24th 2018, invitation should be on the way to WG members.

End of the meeting 10:30 h

Rapporteur: Martina Henning