



Minutes of the Second EURISCO Advisory Committee meeting

11 October 2018, Gatersleben, Germany

Participants

Anne-Françoise Adam-Blondon, INRA (*attending by videoconference*)
Kjell-Åke Lundblad, NordGen
Lorenzo Maggioni, ECPGR
Matija Obreza, Crop Trust (*attending by videoconference*)
Ludmila Papoušková, CRI
Tonny van den Boom, BASF (*representing Paul Olson, KWS*)
Theo van Hintum, CGN (Chair)

Observers

Stephan Weise, IPK (EURISCO Coordinator)
Markus Oppermann, IPK

Unable to attend

José María Iriondo Alegría, URJC
Paul Olson, KWS

The Agenda for this meeting is available online ([here](#)).

1. Welcome and introduction

The Chair of the EURISCO Advisory Committee welcomed all the participants, including the new member of the Committee, A.-F. Adam-Blondon, replacing the retiring Ian Thomas, to whom thanks and good wishes were dedicated. He also welcomed Tonny van den Boom, joining the Committee just this once to replace Paul Olson as representative of the breeding sector. Markus Oppermann, IPK, was welcomed by the Committee as an observer. Thanks went to IPK for hosting the meeting. Participants introduced themselves briefly. The agenda was reviewed and adopted.

2. Report on EURISCO activities since previous AC meeting

S. Weise, EURISCO Coordinator, presented progress, main activities and developments of EURISCO (PPT available [here](#)).

A few points raised by Committee members were then discussed and clarified:

- It is difficult to interpret the instructions in the Multi-Crop Passport Descriptors about “country of origin”. It could be considered to extend the list and distinguish Country of Provenance from Country of Origin with clearer explanations on the respective meaning. At the same time, it is important to remain very conservative regarding changes in the uploading format and stay in line with the MCPD list.
- Collaboration is ongoing between the EURISCO Coordinator and some Crop WGs, wishing to transfer data from Central Crop Databases (CCDBs) into EURISCO. Although the CCDBs include a lot of material that is not in EURISCO, it was found that the main problem is that the CCDBs are outdated and many accessions no longer exist or accession numbers have changed. In the case of the French data in the *Prunus* database,

discussion is going on internally to save the content of the database (technically outdated) in GnpIS as it is considered as important data. Stephan will be contacted to see how we can manage at best the insertion in EURISCO of accessions from different countries in interaction with their focal points.

- So far, a successful interaction has been established with the *Poa* Database, which is automatically updated from EURISCO with passport and phenotypic data and provides additional maps and statistics.
- It was confirmed that data on historic material that is no longer available can be maintained in EURISCO since 2017.
- The results of the questionnaire circulated to EURISCO users should be shared with the Advisory Committee (**Action S. Weise**).
- The Committee appreciated the progress made by the EURISCO team, including the recent opening to phenotypic data and the new search function that enables capturing taxonomic synonyms and misspellings.

3. Position of EURISCO in PGR documentation landscape

Th. van Hintum introduced the topic (PPT available [here](#)).

The discussion mainly focused on the role of CCDBs and Crop Portals, the opportunity to include *in situ*/on-farm data in EURISCO and the future role of EURISCO in the PGR documentation landscape:

CCDBs and Crop Portals

The role of CCDBs for data gathering is no longer important owing to the success of EURISCO in this regard. Remaining CCDBs are often struggling for their existence and should reconsider their reason to be, unless they can sustainably offer useful data that are not available from EURISCO (molecular data, illustrations, etc.). CCDBs could be supported by EURISCO in their conversion to Crop Portals, as the example of the *Poa* database shows.

There was agreement on the usefulness of crop-specific PGR Portals to guide the users to data and material, relying on automatic links with EURISCO for the maintenance of updated inventories (see for example the [Lettuce Crop Portal](#)). The sustainability of such portals was however questioned, as they often rely on limited project funds and the enthusiasm of the creator-teams.

There is the need for groundwork in terms of interoperability, standards that could be used by everyone, such as proper ontologies, to connect communities and develop generic background together, and then implement the standards at the level of the various communities. There are expectations that the GenRes Bridge project will move forward to find solutions for some of these issues.

In situ/on-farm data

Inclusion of relevant *in situ* Crop Wild Relative (CWR) data in EURISCO is among the objectives of ECPGR in its Phase X. Currently there is no information system that is engaged in systematically collecting this type of data. The [Harlan and de Wet Crop Wild Relative Inventory](#), hosted by the Crop Trust, could be the backbone of such a system. The Crop Trust is in discussion with the USDA to make this inventory part of [GRIN-Global Taxonomy database](#). The main problem regarding *in situ* data is not the data format, but the agreement on a structured system for data upload, similar to the backbone of National Inventory Focal Points that has been established for uploading *ex situ* data in EURISCO.

In case of on-farm data, it is even more difficult to reach an agreement on what type of data should be gathered and for what purpose. The project Farmer's Pride is aiming to create

concepts for gathering both *in situ* CWR and on-farm metadata. Two case studies will be tested, from the Netherlands and Turkey. Also the FAO-Treaty Secretariat is interested in developing mechanisms for creating access to *in situ/on-farm* data in the Global Information System. Among others, it was suggested to have a look at the examples of the information systems developed by the animal genetic resources community, since all their data are *in situ*.

- *It was concluded that for the extension of EURISCO to in situ (in-nature and on-farm data), it will be necessary to wait for the results and concepts being developed by the project Farmer's Pride.*

Future role of EURISCO

The current role of EURISCO in the international PGR information landscape was acknowledged important, especially its networking function, operating as a hub for the European national inventories and acting as a platform for the European PGR genebank documentation community. The suggested repartition of roles between EURISCO (support European PGR documentation community, linking between European PGR actors and Genesys), Genesys (repository of PGR accession-related data and provision of access), and WIEWS (provision of metadata overview) was considered a valid one. It was acknowledged that the EURISCO and Genesys interfaces are currently partially overlapping and this may require simplification in the future. Currently the link between Genesys and EURISCO is formalized by the role of Th. van Hintum as a member of the Genesys Advisory Committee and the role of M. Obreza as a member of the EURISCO Advisory Committee.

A possible role of EURISCO for the future might extend to offering a helpdesk function to advise on genebank documentation issues, such as GRIN-Global or other software.

The possible role of EURISCO regarding inclusion of, or linkage to –omics data was not discussed in detail, but should be re-considered in the near future.

4. Phenotypic data in EURISCO

S. Weise described the situation (PPT available [here](#)), with currently nearly 70 000 accessions in EURISCO with non-standardized C&E data. It would be impossible to standardize existing data, but structural commitments could be taken towards better harmonization in the future. It should be important to be able to map data onto agreed ontology terms (such as Crop Ontology) to make it easier to find relevant data, as well as to have a harmonised approach for the description of the processes of phenotyping. The latter could be provided by the MIAPPE (Minimum Information About a Plant Phenotyping Experiment) guidelines, which captures the equivalent of “material and methods” in a paper, but does not give recommendations about the protocol to use.

Collaboration towards harmonization could be built within ECPGR through the Evaluation Network and specific training workshops for data providers, together with the maintenance of a helpdesk function by the EURISCO Coordination.

There are two elements to be addressed:

1. How to capture what has been done to measure a trait (i.e. to capture the method and the scale). This is mandatory to re-use the data.
2. How to standardize at best the vocabulary useful to search for results for specific traits. One possibility would be to standardize the trait name but all the vocabulary used to describe the method can also be useful with the current method of indexing.

During the discussion, it was remarked that the Crop Ontology initiative is valuable in structuring trait names, but it is currently limited to only a few crops and at varying quality levels. Ontologist communities are strong and are making progress towards standardization of traits' vocabulary. In many cases they are likely to be able to self-sustain and continue their progress. However, it is not realistic to ask genebanks to have clean ontologies as a first step. Genesys is only focusing on metadata about datasets, linking to ontologies as far as possible, but not relying on crop ontologies, since they describe traits, but are not created in a way that can be picked up by computer systems. Too much curatorial work would be needed to create informatics links.

A strong engagement of the crop experts (ECPGR Crop WGs) could make it feasible to work towards a better harmonization, eventually.

The MIAPPE guidelines would not require changes in the EURISCO format, but could be recommended as a harmonized way to describe the experiments. At the moment most genebanks are not equipped or trained enough to use MIAPPE. The GenRes Bridge project can be used to develop recommendations on the level of use of MIAPPE standards.

It was also remarked that data users are not interested in fine-grained details, but will always prefer to test the material in their own environment.

- *It was concluded that, for the harmonization of phenotypic data, existing ontologies, such as Crop Ontology, are a possible valid reference to point at, but a final decision will require more investigation on pros and cons.*

5. EURISCO Training activities

S. Weise summarized the training activities carried out during Phase IX, including four annual workshops organized (PPT available [here](#)). The Committee appreciated the useful work done.

- *It was agreed that trainings every two years would be sufficient. The next workshop could be held in 2020, with focus on South-East Europe (and possibly be funded with the GenRes Bridge project budget), while the following one in 2022 could focus on North-East Europe.*

It was recommended to include in the training also a component to raise the attention of the documentation persons on the key data to enable compliance by the users with the Nagoya Protocol.

It was proposed to also focus on training of users of EURISCO. These could be organized in the form of webinars, with small groups of users providing their feedback, and the involvement of ESA for this initiative would be welcome.

6. New functions and planning

The EURISCO Coordinator described the plans for the future (PPT available [here](#)).

A short-term expectation is that the service to help National Inventory Focal Points to assign DOIs to the collections will be implemented by the end of the year.

Regarding data harvesting (e.g. by IPT tool), it was reiterated that it would only serve high tech users and that it is important not to lose flat file providers.

Proposals were made to consider linking accessions to related publications and also creating a feature to find 'synonyms' of accession numbers to identify similar accessions.

Possible implementation of the Public Plant Breeding API (BrAPI) to harvest data was mentioned as a good long-term investment, but offering a very narrow scope in terms of passport and phenotypic information, since it only captures the identification of accessions. There is a working group currently improving this aspect.

- *It was generally agreed that the focus of EURISCO during Phase X should be on phenotypic data, crop wild relative in situ data and data quantity and quality improvement.*

7. Operation of Advisory Committee

The Committee agreed on the following new provisions:

- *The EURISCO workplan, which is prepared by the EURISCO Coordinator at the beginning of each year, should be circulated to the entire Committee for comments before approval by the Chair of the Committee.*
- *The Committee aims at face-to-face meetings at least every two years, but it would benefit of more frequent interactions, which could be scheduled in the form of Skype teleconferences.*