

Overview of ECPGR initiative: European Evaluation Network (EVA)

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What is ECPGR

ECPGR is a collaborative Programme among most European countries since 1980, aiming at ensuring the **long-term conservation** and **facilitating the utilization** of plant genetic resources in Europe



Structure for Phase X (2019-2023)

Steering Committee

Executive Committee

Coordinating Secretariat

Crop Working Groups

Thematic Working Groups

- *Allium*
- *Avena*
- *Barley*
- *Berries*
- *Beta*
- *Brassica*
- *Cucurbits*
- *Fibre Crops (Flax and Hemp)*
- *Forages*
- *Grain Legumes*

- *Leafy Vegetables*
- *Maize*
- *Malus/Pyrus*
- *Medicinal and Aromatic Plants*
- *Potato*
- *Prunus*
- *Solanaceae*
- *Umbellifer Crops*
- *Vitis*
- *Wheat*

- *Wild Species Conservation in Genetic Reserves*
- *On-farm Conservation and Management*
- *Documentation and Information*

Objectives of ECPGR Phase X (2019–2023)

1. To efficiently conserve and provide access to unique germplasm in Europe through **AEGIS** and the **European Collection**
2. To provide passport and phenotypic information of actively conserved European PGRFA diversity *ex situ* and *in situ* through the **EURISCO** catalogue
3. To improve *in situ* conservation and use of **crop wild relatives**
4. To promote **on-farm** conservation and management of European PGRFA diversity
5. To promote **use** of PGRFA

ECPGR – examples of tools/achievements



**European Search
Catalogue for Plant
Genetic Resources**



*A European Genebank
Integrated System*

EVA

European Evaluation Network

Establishment of EVA framework and project plan

2017 – 2019 through two German-funded ECPGR projects

2017 – 2018:

Workshops on how to improve collaboration with users in public and private sectors and building of [PPP knowledge base](#). Formulation of EVA framework.

2018 – 2019:

Two workshops for the formulation of the EVA network projects on wheat and barley and vegetables

Approval of EVA framework by ECPGR Steering Committee

Establishment of the European PGRFA Evaluation Network (EVA)

WHEREAS the world is facing increasing challenges to food security through the loss of diversity and the underutilization of the diversity that exists;

WHEREAS the natural range of growing conditions in Europe calls for and permits more comprehensive evaluation of PGRFA across different environments;

WHEREAS it is of strategic importance for Europe to better utilize Plant Genetic Resources for Food and Agriculture to facilitate adaptation of European agriculture to climate change and to contribute towards the achievement of Sustainable Development Goals;

WHEREAS it is important not only to increase the use of genetic diversity in plant breeding, but also to increase the diversity of stakeholders in plant breeding, including private and public sectors, small and medium enterprises and participatory plant breeding actions;

WHEREAS there is an opportunity to build on existing networks for conservation and use of PGRFA and to develop a European PGRFA Evaluation Network which is open for participation by both private and public sectors in order to facilitate the exchange of data on evaluation in a standardized format;

Now therefore, the Steering Committee of the ECPGR hereby establishes the European PGRFA Evaluation Network in the form of Private/ Public Partnerships within the framework of the European Cooperative Programme for Plant Genetic Resources (ECPGR), in accordance with the following provisions.

01 Definitions

For the purposes of this Proposal –

- i) "AEGIS" means the European Genebank Integrated System;¹
- ii) "ECPGR" means the European Cooperative Programme for Plant Genetic Resources;
- iii) "EURISCO" means the European Search Catalogue for Plant Genetic Resources;²

¹ AEGIS entered into force in 2009 within the framework of ECPGR in order to improve coordination with respect to the conservation of PGRFA in Europe and to facilitate the exchange of PGRFA and related information among the countries and genebanks of Europe, and is now functioning to conserve genetically unique and important accessions for Europe and to make them available for breeding and research

² EURISCO is a European cooperative mechanism, which provides information on nearly 2 million accessions of crop plants and their wild relatives, preserved *ex situ* by almost 400 institutes, based on a network of National Inventories of 43 member countries: EURISCO forms part of the Global Information System on Plant Genetic Resources for Food and Agriculture provided for under the International Treaty of Plant Genetic Resources for Food and Agriculture, and is now being extended to characterization and evaluation data.

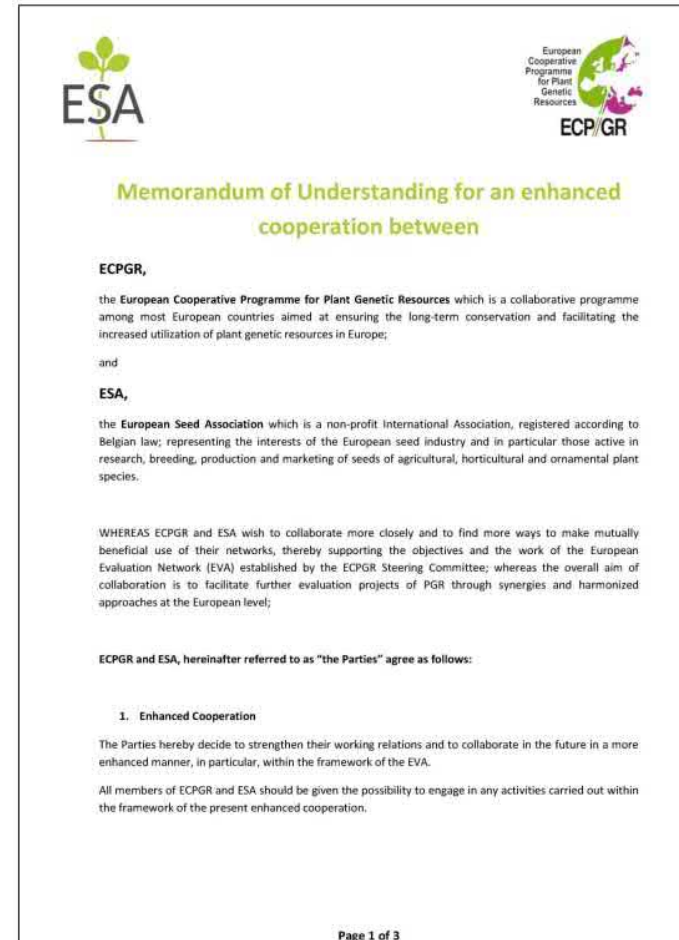
EVA framework was approved by the ECPGR Steering Committee in Thessaloniki, May 2018

It contains principles of the project and draft letters of commitment and consortium agreement

MoU between ESA/Euroseeds and ECPGR

Enhancing cooperation of
ESA and ECPGR within the
framework of EVA.

Promoting participation of
members of ESA and
ECPGR in collaborative
efforts for the evaluation of
PGRFA



Scope and goal of European Evaluation Network

Scope

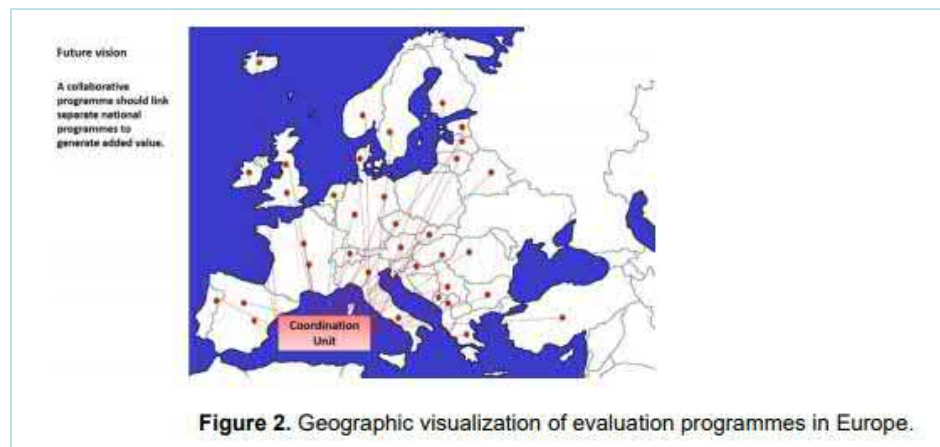
The scope of the European PGRFA Evaluation Network regards the generation and linkage of phenotypic and genotypic data to develop genetic markers and information for the enhanced use of PGRFA in breeding (at pre-competitive level) and research.

Overall goal

To increase, facilitate and improve the use of genetic diversity present in PGRFA in Europe for crop improvement.

Specific goals of the European Evaluation Network

- Establishment of networks for the evaluation of PGRFA
- Coordinated secondary evaluation for biotic and abiotic stresses with same methods and standards
- Improved inventories with solutions for integration of phenotyping or genotyping information
- Development of a dynamic information system for a coordinated data acquisition and assessment



(source of figure: Report of the PPP workshop, June 2017, Bonn)

Objectives of the Evaluation Network

- Promote and support the establishment of crop- or crop group-specific European Private Public Partnerships and other collaborative projects to carry out targeted evaluation of PGRFA.
- Promote and improve the digitization, harmonization, availability and exchange of existing and newly generated evaluation data of PGRFA using to the extent possible the existing EURISCO infrastructure.
- Improve the evaluation of PGRFA through coordinated and collaborative efforts, using harmonized methods and standard protocols and the development of best practices, guidelines and tools.
- Promote cooperation with other relevant EU infrastructures and collaborations related to the scope of the network.

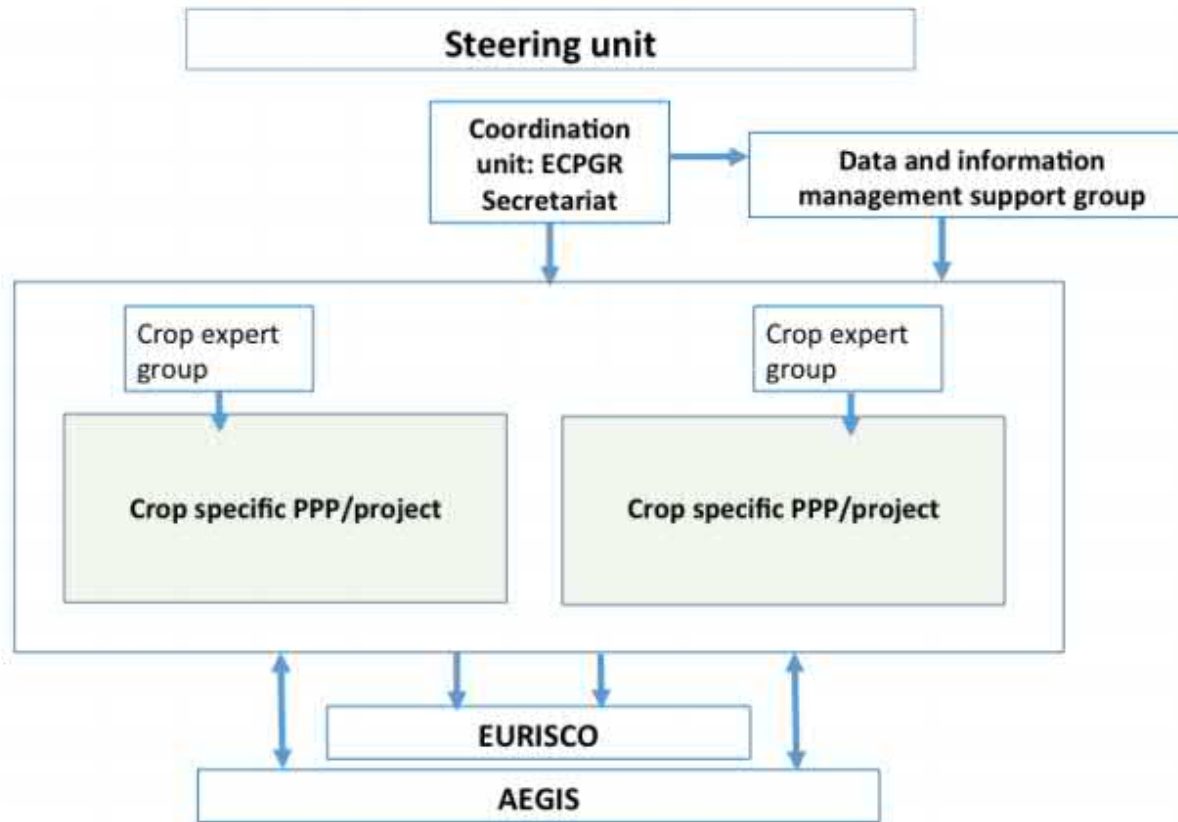
Expected benefits

- Increased access to well-evaluated genetic material and related information from all over Europe;
- Structured network allowing for the testing of PGRFA across a wide range of agro-environmental areas, using the same standards and methods, thus generating data that are scientifically more meaningful and useful for plant breeding;
- Centralization of data in a dynamic information system (EURISCO) providing privileged access (data embargo) for network partners;
- Further strengthening and use of a well-developed and coordinated infrastructure for long-term maintenance of relevant material (AEGIS);
- Mechanism for pooling resources for evaluation of PGRFA in order to better exploit the diversity of growing conditions across the region;
- Transfer of knowledge and ideas among genebanks, crop and breeding communities.

Principles of EVA

- In accordance with the principles of the International Treaty on PGRFA
- Use of SMTA for the transfer of PGRFA
- Maximum use of the European Collection (AEGIS)
- Maximum use of agreed standards and ontologies for evaluation and production of data
- Maximum use of EURISCO
- Use of ECPGR supportive structure (Crop Working Groups)
- Agreed rules about release of evaluation data (**to be agreed project-wise**)
- In principle self-funded (**but not necessarily so**)

EVA structure



Letter of Commitment

ANNEX A

EVA – Letter of Commitment

_____, being a person or entity committed to active involvement in the evaluation of plant genetic resources in the European region, wishes to become a member of the European PGRFA Evaluation Network (EVA), and undertakes to adhere to the Principles set out in Point 04 of the Proposal for the Establishment of the European PGRFA Evaluation Network and to abide by the following commitments:

- Membership of EVA is free of charge: Participation in specific projects may have financial implications, which shall be set out in the applicable cooperation agreement.

Generators of data

- Full data on evaluations undertaken through any EVA crop-specific PPP project should be made available to other members of the EVA crop-specific PPP project. This could be through EURISCO directly or through links provided by EURISCO. The full data should be made available within such period as may be specified in the applicable crop-specific PPP project Cooperation Agreement;
- To abide by all restrictions on the release of evaluation data produced in the context of the crop-specific PPP in which they are involved in accordance with the rules adopted by the corresponding crop-specific PPP project Cooperation Agreement;
- To actively participate in the work of any crop-specific PPP activity charged with setting standards for the crop(s) covered by the crop-specific PPP in which they are involved and to abide by applicable agreed standards;

Model Cooperation Agreement defining:

- Partners
- Material to evaluate and traits
- Evaluation Protocols
- Definition of tasks and deadlines
- Embargo period before the data are made public outside the cooperation
- Adoption of SMTA for distribution of material



Thank you for your attention!