

# Overview of ECPGR initiative: European Evaluation Network (EVA)

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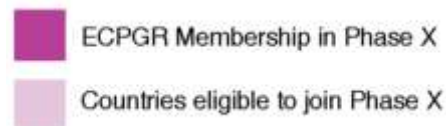
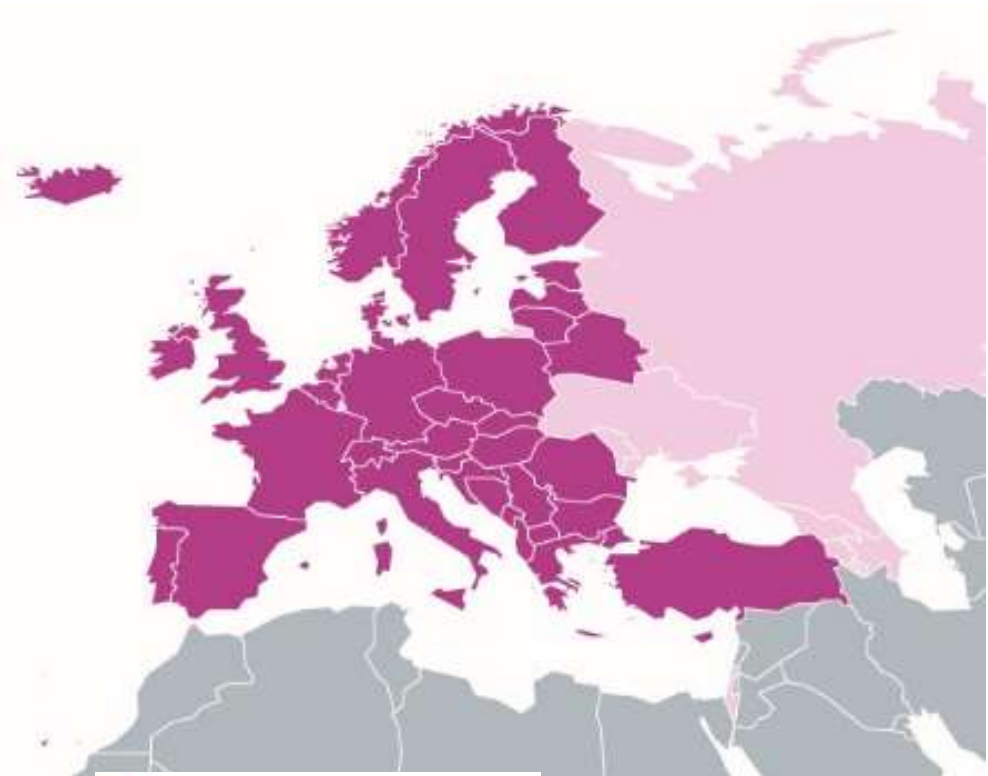
Workshop for the establishment of a European Evaluation Network (EVA) on vegetables  
2-3 April 2019, Durrës, Albania

# Content

- Short overview of ECPGR
- The German-funded project on Private Public Partnerships
- European Evaluation Network
  - Scope and goal
  - Objectives
  - Expected benefits
  - Principles
- Expectations from this workshop

# What is ECPGR

**ECPGR** is  
a collaborative  
Programme among  
most European  
countries, 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*



Implementing FAO International Treaty  
on PGRFA

# How to improve collaboration with users in public and private sectors

## German-funded project (PPP) 2017-18

### First Phase (Feb - Jul 2017)

- Establishment of PPP knowledge base (ECPGR website)
- Workshop in Bonn (June 2017) - 48 participants from 17 countries

### Second Phase (Aug 2017 - May 2018)

- Advisory Group + legal advisor
- Workshop I (Maccarese, October 2017)
- Workshop II (Maccarese, March 2018)

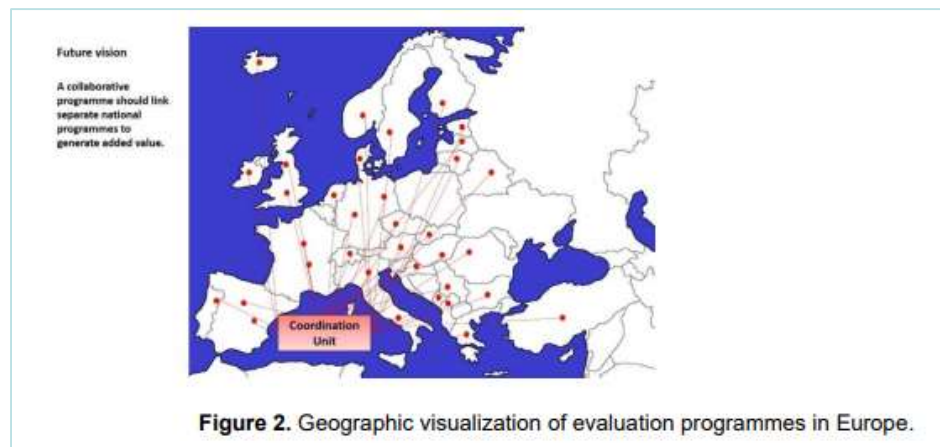
# Considerations from Bonn workshop

- European PGRFA Evaluation Network of strategic importance for Europe: opportunity to position PGRFA at a more strategic level within Europe
- Critical role in facilitating adaptation of European agriculture to climate change
- Contribute towards achievement of related Sustainable Development Goals
- Important to increase use of genetic diversity in plant breeding and diversity of stakeholders in plant breeding using PGRFA



# Goals of a European Evaluation Network

- Establishment of a Network 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)

# PPP project Phase II

## Advisory Committee to prepare framework for a European PGRFA Evaluation Network

1. European Seed Association
2. Bioversity International
3. FAO International Treaty
4. NordGen, Sweden
5. CGN, the Netherlands
6. University of Warwick, UK
7. Wallon Centre of Agronomic Research, Belgium
8. JKI, Germany
9. INRA, France
10. GFPI, Germany
11. Plantum, The Netherlands
12. BLE, Germany
13. Ministry of Agriculture, Denmark

# 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.

# 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 members;
- 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.

**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 as 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 -

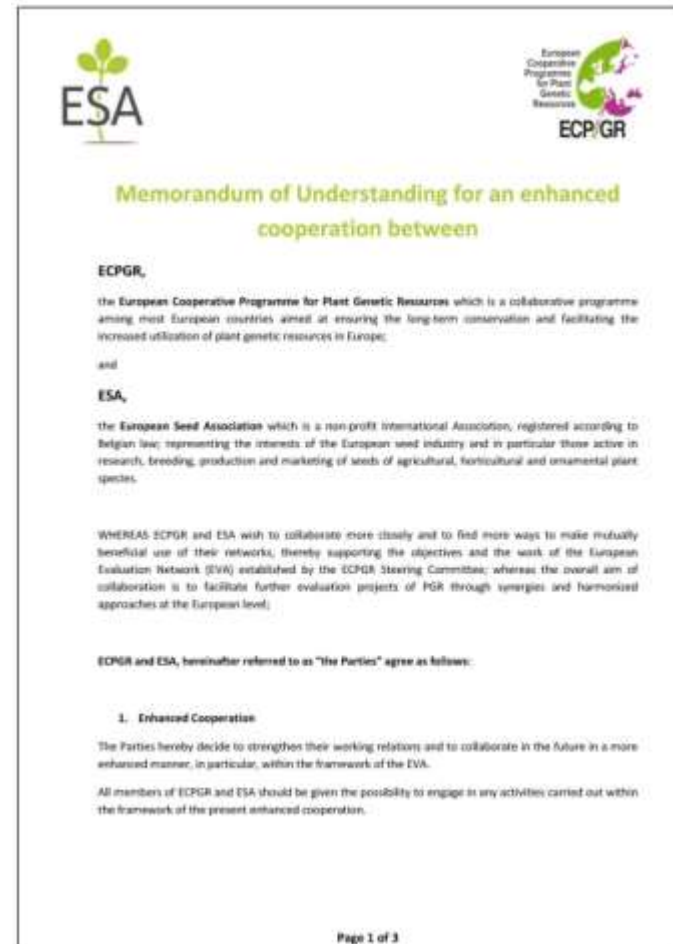
- i) "AEGIS" means the European Genebank Integrated System;<sup>1</sup>
- ii) "ECPGR" means the European Cooperative Programme for Plant Genetic Resources;
- iii) "EURISCO" means the European Search Catalogue for Plant Genetic Resources;<sup>2</sup>

<sup>1</sup> 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.

<sup>2</sup> EURISCO is a European cooperative mechanism, which provides information on nearly 2 million accessions of crop plants and their wild relatives, preserved *in 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** approved by the  
ECPGR Steering  
Committee in  
Thessaloniki, May 2018

# MoU between ESA and ECPGR, promoting collaborative efforts for the evaluation of PGRFA

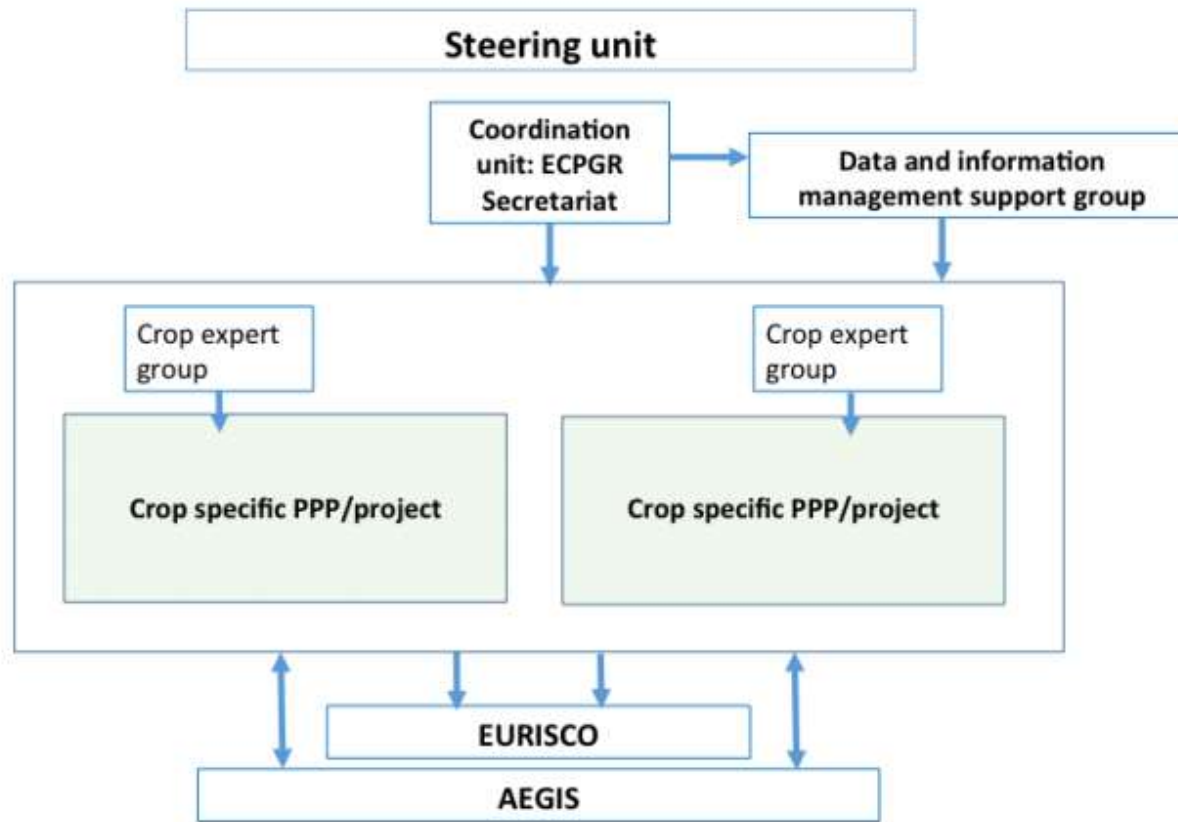


# Principles of EVA

- In accordance with the principles of the Treaty
- Use of SMTA for the transfer of PGRFA
- Maximum use of the European Collection (AEGIS)
- Maximum use of agreed standards 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

# From the EVA framework to EVA implementation

Opportunity from German Ministry to organize two crop-specific workshops with volunteering communities:

- Barley and Wheat (Berlin, November 2018)
- Vegetables (Durrës, April 2019)

# Expectations from this workshop

## General discussion (first day)

- Information on related initiatives
- Verify interest of the participants (genebanks, breeders)
- Verify suitability of proposed EVA framework (or adaptations required)

## More detailed discussion (second day)

- Crops, material and traits
- Type of standards
- Conditions of operation (Embargo, SMTA, cooperation agreement, information system requirements, partners)
- Proposal for funding – planning implementation steps





**Thank you for your attention!**