

# REPORT ON

# **ECPGR PHASE X**

## January 2019–April 2023



Prepared for the 17<sup>th</sup> Steering Committee meeting  
30 May – 1 June 2023, Oeiras, Portugal

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## 1. Introduction

Phase X of ECPGR (2019–2023) was launched at the [15th Steering Committee meeting](#), held in Thessaloniki, Greece, in May 2018.

This report, prepared for the 17th (End-of-Phase) Steering Committee (SC) meeting, is intended to summarize and complement the information provided with the ECPGR Annual reports for the years 2019–2022. Decisions taken in Thessaloniki (2018) concerned a new set of ECPGR objectives and some adjustments to the mode of operation and Working Groups' (WG) structure, which were finalized in 2018 before the end of Phase IX. In particular, the mode of operation was simplified, still maintaining the principle of two budget lines for WG activities ('meetings' and 'other activities'). The country quota for meetings was also maintained.

Regarding the WG structure, no major restructuring was eventually decided, but two new WGs (Berries and Maize) were accepted and various proposals for improvement, raised by the WG Chairs during their [joint meeting in Ljubljana](#), Slovenia, in October 2017, were also taken on board.

Additionally, the Thessaloniki meeting proposed the organization of a workshop on AEGIS and endorsed the [European Evaluation Network](#) (EVA). The [AEGIS workshop](#) was held in December 2018 in Madrid, Spain, while EVA became an important initiative during Phase X, as accounted for in this report.

The [ECPGR Communication and Public Relations strategy](#), developed by a specific Task Force was extensively discussed in Thessaloniki and was eventually finalized and approved by the SC in January 2020.

A total budget amounting to €2.7 million was agreed upon for Phase X, with the envisaged participation of 36 countries, divided into 11 categories of contribution. This starting budget was increased in the subsequent four years, reaching €4.38 million at the end of 2022, thanks to carryover from past phases and voluntary contributions from Germany and Hungary, as detailed in the ECPGR 2022 Financial Report. A further slight increase will be reflected by the end of 2023, owing to the contribution of Poland, which joined ECPGR again in 2023.

Also, the successful participation of the ECPGR Secretariat in three Horizon 2020 projects (GenRes Bridge, AGENT and PRO-GRACE), enabled savings in a few ECPGR budget lines (especially staff costs in the range of €390,000 in total), as some costs were covered by the European Commission (EC) funds.

This report is an update of the [Mid-Term Report](#) that was provided in 2022 and gives an account of the implementation of Phase X until the end of April 2023. These years were characterized by areas of considerable activity and progress (especially through the EC and German-funded projects), while the activities of the WGs have initially suffered, mainly due to the effects of the COVID-19 pandemic. However, during the last year, many Working Groups restarted operating, meeting and making plans, including submitting successful proposals to the attention of the ExCo.

Progress made towards the ECPGR objectives, to the best knowledge of the Secretariat, is given through an account of the outputs' indicators, in the table of the ECPGR Objectives for Phase X – Activities and indicators (see [Background documents](#)).

## 2. Implementation of Phase X

### 2.1 Participation of countries/memberships

Out of the 36 countries that were expected to participate in and contribute to Phase X, only Bosnia and Herzegovina was not able to contribute as a member to this Phase. In 2023, Poland joined again the Programme after several years. Azerbaijan and Ukraine (the latter with FAO support) expressed the intention to join in the new Phase XI, starting in 2024. The expressed potential interest of Liechtenstein

did eventually not concretize. Identified Focal Points of potential new member countries are included in the 'steering listserver' and thus receive all the information circulated to the Steering Committee members.

## 2.2 Mode of operation and network structure in Phase X

The [Mode of operation](#) for Phase X, defining rules and guidelines for the use of the budget lines 'Meetings' and 'Other activities' was finalized in October 2018, including the table of country quotas, applicable for participation in WG meetings. The mode of operation was much simplified, compared to the previous Phase. WGs were given the opportunity to request meetings with simple justifications, to be approved by the Executive Committee (ExCo) within four weeks from submission. Other activities remained possible through the submission of proposals under Grant Scheme Calls. Rules for the preparation of the proposals were simplified (no limitations in the number of participants, no need to use country quota, freedom to apply for either meetings or actions) and the maximum budget per proposal was gradually increased from €15,000 to €30,000.

[Amendments to the Network structure](#) were also agreed upon in October 2018, with the establishment of two new WGs. WGs were maintained open to an unlimited number of members nominated by the National Coordinators, with the invitation to define a contact person in case more than one member per country was nominated. As no requests for changes were raised by National Coordinators, all the Chairs that had concluded Phase IX were re-appointed by the ExCo at the beginning of Phase X. Owing to the retirement of a few former Chairs, new Chairs were appointed in the Fibre Crops (Nov 2019), Wheat (Jun 2020), Documentation and Information (Nov 2021), *Vitis* (Mar 2022) and Forages (Feb 2023) WGs. Chairs of the Fibre Crops and Solanaceae WGs resigned from their position respectively in February and May 2022. No replacements were found since then for these two positions.

In February 2022, the SC endorsed the establishment of a WG on Cryopreservation. The SC recommended the WG to develop a concept for the most rational and efficient way to collaboratively conserve under cryopreservation the relevant European material, sharing the task among a suitable number of European cryo facilities. The SC also requested to review the work done by the WG at the next SC meeting in June 2023 to monitor the appropriateness of its continuation as part of the ECPGR permanent structure.

The name of the 'Wild Species conservation in genetic reserves' WG was changed to 'Crop Wild Relatives' WG by a suggestion of the Chair, accepted by the Steering Committee in June 2022. The scope of the WG will cover *in situ* and *ex situ* strategies and techniques, as well as wild food plants (WFP).

A new budget line defined at the beginning of the Phase, established the opportunity to hold meetings of all the Chairs twice per Phase and in advance of the Steering Committee meetings, to facilitate inter-group coordination and discuss items for the attention of the Steering Committee. Two [meetings of the WG Chairs and the Executive Committee](#) were held online respectively in April 2022 and March 2023. The first meeting followed the compilation by the Chairs of a questionnaire, which gave suggestions for improvement of the mode of operation (see [Background Document](#) 'Minutes of the Meeting of the Working Groups' Chairs and the Executive Committee (5–6 April 2022)'). The [second meeting](#) offered the Chairs the possibility to comment and suggest amendments to background documents setting the scene for ECPGR Phase XI, specifically the draft 'Tables of Priorities for Phase XI of ECPGR' and the draft revised 'ECPGR Terms of Reference for Operational Bodies and Mechanisms'.

## 2.3 Operation of the ExCo

Between 2019–2023, the ExCo formally met thirteen times (either in person or online). Regular rotations took place for the members representing the region South (Portugal replacing Italy in 2019 and Italy replacing Portugal in 2023), the region West (Switzerland replacing Belgium in 2020), the region North

(Denmark replacing Estonia in 2021) and the region East (Slovakia replacing the Czech Republic in 2022). A new Chair (Marianne Lefort) was also appointed by the Steering Committee in 2019 when Eva Thörn decided to retire from this position.

The main activities of the ExCo were related to:

- Launch Grant Scheme Calls for proposals and evaluation of the submitted proposals
- Contribution to the GenRes Bridge project and its immediate follow-up, with an advisory role on behalf of ECPGR during the development of the *Genetic Resources Strategy for Europe* and later as members of a drafting team for the development of the *Plant Genetic Resources Strategy for Europe*
- Finalization of the ECPGR Communication and Public Relations Strategy and involvement in the preparation of a video on ECPGR
- Appointment of WG Chairs
- Preparation of the Mid-Term and End-of-Phase Steering Committee meetings
- Preparation of and participation in two WG Chairs' meetings
- Preparation of the Memorandum of Understanding for enhanced cooperation with the Crop Trust for further agreement of SC members
- Preparation of an ECPGR position statement on Farmer's Pride for further agreement of SC members
- Definition of Terms of References for new Task Forces and establishment of a Task Force on the 'Revision of ECPGR Terms of Reference'
- Soliciting and offering feedback to the NordGen Director about the preparation of a draft document for the establishment of a genebank managers network
- Preparation of draft Tables of Priorities for Phase XI
- Approval of donation to the Ukrainian genebank
- Discussion on request of support for regeneration of soybean accessions and, more generally, on the potential ECPGR contribution to European endangered collections.

(See also Report from the ExCo on its activities during Phase X available in [Background documents](#))

## 2.4 Operation of the Steering Committee

Between November 2020 and November 2021, the Steering Committee was involved in supporting, commenting and eventually endorsing the *Genetic Resources Strategy for Europe* (GRSE) and the domain-specific *Plant Genetic Resources Strategy for Europe* (PGR Strategy), within the framework of the GenRes Bridge project. Specifically, a drafting team composed of the ExCo members and other six National Coordinators were heavily involved in drafting the PGR Strategy. Key events have been the online feedback workshop on the GRSE on 24–26 November 2020, and the launch of the strategies, presented to the EC and genetic resources stakeholders on 30 November 2021 in Brussels, Belgium. A follow-up process to raise the strategies to the attention of policymakers has been planned in 2022 (first semester) under the French Presidency of the European Union, continued under the presidencies of the Czech Republic in 2022 (second semester) and of Sweden in 2023 (first semester).

The Steering Committee provided comments and eventually its endorsement to two documents prepared by the ExCo and the Secretariat: 1) the Terms of Reference for the position of Working Group Chair of the Documentation and Information WG (endorsed in April 2021) and 2) the statement in preparation for the final meeting of the EC project Farmer's Pride, held in June 2021. The former document will be annulled by the revised version of the ECPGR Terms of References.

The Sixteenth (Mid-Term) Steering Committee meeting, held in Malmö/Alnarp, Sweden, in June 2022, took note of the PGR Strategy for Europe, developed as part of the EC-funded project GenRes Bridge, and agreed on a set of priority objectives for a new Phase XI of ECPGR, corresponding with the targets

of the PGR Strategy. Main recommendations at this meeting were related to the establishment of ad hoc Task Forces. Support for the Ukrainian genebank was also decided and the appointment of co-Chairs for the new Cryopreservation WG was suggested (see below). Prioritization of targets for ECPGR Phase XI was started by subregional groups.

After the meeting, the SC received for comments both draft tables of priority activities for Phase XI of ECPGR, and draft revised Terms of Reference for the ECPGR bodies and mechanisms. Through email interactions, the SC also expressed approval for the Letter of Intent prepared by the French Ministry of Agriculture, whereby France, upon signature, will be considered a member of AEGIS.

Finally, a few NC supported the future establishment of a genebank managers' network. As Lise Lykke Steffensen (NordGen) agreed to act as 'ad hoc Chair', she is expected to propose a mode of operation for this network during the next Phase XI.

## 2.5 Secretariat staff and hosting arrangements

During the first part of Phase X, the Secretariat underwent several staff changes. In addition, in June 2020, the office moved from Maccaresse to the new building of the hosting institute, the Alliance of Bioversity International and CIAT, in the centre of Rome, near FAO. Due to a lack of storage space in the new premises, the ECPGR archive (paper documents, publications, etc.) was partly disposed of and partly packed and deposited into a rented external storage space. Due to the COVID-19 pandemic, a lockdown with working-from-home arrangements started in March 2020 and only limited access to the office was allowed until recently. Consequently, the Secretariat has largely operated in smart-working mode, working from home as of March 2020. Specifically, the ECPGR Secretary eventually decided to permanently relocate and work from his home in northern Italy, while the rest of the staff selected a partial working-from-home arrangement. Staff members continued to regularly meet online at a minimum once every week for a Secretariat Coordination meeting, together with the EURISCO Coordinator.

In November 2019, Sandra Goritschnig joined the Secretariat as Scientific Officer, with the task to manage the German-funded project for the development of a European Evaluation Network (EVA), as well as establishing and developing the online *Genetic Resources* journal, as part of the EU-funded GenRes Bridge project.

In August 2020, Lidwina Koop left her position as Programme Assistant and was replaced in October 2020 by Loredana Maria, an Associate providing administrative, secretarial and logistical support to the ECPGR Secretariat and team.

Between September 2020 and December 2021 and again between November 2022 and January 2023, Vanessa Bryant offered temporary administrative support to the ECPGR Secretariat and the EVA project.

In March 2021, Scientific Assistant Elinor Lipman decided to take early retirement. A new Editing and Communications Specialist, Nora Capozio, joined the team in November 2021 to provide editorial and web publishing support to ECPGR, as well as to deal with ECPGR communication activities such as website management and communication strategy development.

Between October and December 2019, Sonja Ensslin, a student of Geography at the Rheinische Friederich-Wilhelms Universität, Bonn, Germany, joined the Secretariat for a 3-month internship, helping with communication, reporting and website maintenance and receiving training on PGR networking in Europe.

Between June and August 2022, Fernando Luque Cuesta, History and Arts PhD Student at the University of Granada, Spain, contributed to public awareness products for the ECPGR Secretariat and the University of Perugia, Italy with an internship funded by ECPGR, producing scientific illustrations in digital format of Italian landraces.

Jan Engels, Honorary Fellow of the Alliance of Bioversity International and CIAT, was hired to dedicate a small part of his time, between 2021 and 2023, to help the Secretariat with AEGIS-related tasks.

In 2023, the position of 'Research specialist' was opened with tasks related to support the EVA Network, the PRO-GRACE Horizon Europe project and communication activities. The selection process was nearly concluded at the end of April 2023.

Within the organigram of the Alliance of Bioversity International and CIAT, the ECPGR Secretariat is classified as a 'hosted organization'. This status means that the Secretariat maintains a high level of independence in decision-making and notably, the supervisory role over the ECPGR Secretary is assigned to an external person, i.e. the Chair of the Executive Committee, currently Marianne Lefort. A formal agreement with terms and conditions of the hosting arrangement for Phase XI should be completed between ECPGR and the Alliance.

## 2.6 Implementation of SC decisions from the Sixteenth (Mid-Term) meeting

- **ECPGR towards Phase XI**

The ExCo drafted Terms of Reference for three potential ad hoc task forces to be established on: 1) Revision of ECPGR ToRs; 2) Capacity development; 3) Communication and dissemination of results. The first one was effectively established, while it was not possible to find volunteers to serve for the other two. The Task Force for the revision of the ECPGR Terms of Reference operated through online meetings, working towards the revision of the document 'ECPGR Goal, rules of procedures and terms of reference for the operational bodies, second edition, February 2018'. After a round of circulation to the SC and the WG Chairs, the revised document is proposed for approval to the End-of-Phase SC meeting.

- **Hosting arrangements**

The Secretariat negotiated a draft budget for Phase XI of ECPGR with the Finance office of Bioversity International and this is submitted to the attention of the SC at the End-of-Phase meeting.

- **Support from ECPGR to the Ukrainian genebank**

A first donation of €5,000 was made by ECPGR to the National Centre of Plant Genetic Resources in Karkhiv in May 2022, to support the work carried out by the Ukrainian genebank in conserving and sharing important and unique plant genetic resources. In July 2022, two additional donations were provided, of respectively €5,000 to cover fuel costs at the National Centre of Plant Genetic Resources in Karkhiv and €18,896 for staff salaries at the Ustymivska Experimental Station of Plant Production. These donations were provided as complementary support as part of a group of sponsors' initiative to set up an aid plan with short- and medium-term steps. The initiative was coordinated by the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) Secretariat and included, *inter alia*, Germany, NordGen, Poland, Romania, Sweden, the ECPGR Secretariat, the UK, the Crop Trust, USAID and Canada.

- **Implementation of a Cryopreservation WG**

As suggested by the SC, two co-Chairs, Miloš Faltus from the Crop Research Institute, Czech Republic and Bart Panis, from the Alliance of Bioversity International and CIAT and KU Leuven, Belgium, were appointed in August 2022 for the WG on Cryopreservation. The Letter of appointment indicated the expectations of the SC that a concept be developed for the most rational and efficient way to collaboratively conserve under cryopreservation the relevant European material. The outcome of the first meeting of the Cryopreservation WG, scheduled for 3-4 May 2023, will be summarized at the End-of-Phase SC meeting.

## 2.7 WG Activities – meetings

The two new WGs, Berries and Maize, started the Phase with their first meetings. These were sponsored by the German Federal Ministry for Food and Agriculture.

**The First meeting of the Maize WG** was organized on 2-3 December 2019 in Belgrade, Serbia, in collaboration with the Maize Research Institute Zemun Polje, Belgrade, and involved 20 WG members and five observers. Participants presented the status of maize genetic resources in their countries and then the group agreed to work on the expansion of the Maize Core Collection, the adaptation of crop-specific conservation standards based on the FAO Genebank standards and the use of existing key descriptors for common minimum descriptors, the promotion of the AEGIS procedure for the identification of suitable accessions for inclusion in the AEGIS European Collection and surveying redundant accessions. The report of the meeting is available [here](#).

**The first meeting of the Berries WG** was held on 14-15 January 2020 in Dresden, Germany, organized in collaboration with the Julius Kühn-Institut (JKI). Twenty-three participants from 17 countries reported on the status of berry genetic resources in their collections and their main focuses, challenges and opportunities. The Group agreed to start their activity with an inventory of all existing berry germplasm that is maintained in Europe. These data should then find their way into the EURISCO catalogue and set the basis for priority characterization, evaluation and molecular analysis, as well as to select the most important and unique accessions for inclusion into the European Collection. The report of the meeting is available [here](#).

Four WGs (*Allium*, Crop Wild Relatives, Cryopreservation and Solanaceae) submitted a request to organize their WG meetings using the ECPGR 'meetings' budget line. These were all approved for funding by the ExCo. After delays owing to the COVID-19 pandemics, the *Allium* meeting was held in October 2022, while the Solanaceae meeting was cancelled since in the meantime the WG remained with a vacant Chair. The Crop Wild Relatives WG meeting was held in December 2022 and the Cryopreservation meeting was scheduled for May 2023.

**The Eighth meeting of the *Allium* WG** was held in Skierniewice, Poland, from 11-12 October 2022, organized with the National Institute for Horticultural Research (InHort) and attended by representatives of 13 countries. The Co-Chair of the Working Group on Cryopreservation, Milós Faltus, Czech Republic, also attended and was instrumental in starting cooperation between the two WGs. Each country representative presented the status of their *Allium* collections, including main problems and proposals for collaborative action. The Group decided to focus on the preparation of a project proposal under the ongoing ECPGR Grant Scheme Sixth Call. The project aimed at systematic genotyping and phenotyping of garlic accessions provided by partner genebanks and defining a strategy for garlic conservation in Europe, including sharing tasks for cryopreservation. The project was eventually approved for funding by the ExCo (see Garli-CCS, Section 2.8). The meeting report was published [here](#).

**An ad hoc meeting of the Crop Wild Relatives WG** was held from 13–15 December 2022 in Thessaloniki, Greece, in collaboration with the Hellenic Agricultural Organization – DIMITRA, Institute of Plant Breeding and Genetic Resources. The meeting was dedicated to starting the preparation of a project proposal under the HORIZON Call CL6-2023-BIODIV-01-13 – Crop Wild Relatives for sustainable agriculture. The project proposal (EURO-CWR) was then submitted for funding in March 2023, under the coordination of the University of Birmingham, UK.

## 2.8 WG Activities – other actions (implementation of the Grant Scheme)

Six Calls for proposals were launched between 2019 and 2023. Twenty-one (21) proposals were submitted and 15 were awarded for a total of €385,622 involving 16 WGs. The maximum amount that the ExCo decided to assign per Working Group in each proposal was increased from €15,000 (first two

Calls) to €20,000 (second two) and eventually €30,000 (last two Call). The maximum awarded was €60,000 for one proposal (Garli-CCS) jointly submitted by three WGs.

In comparison, during Phase IX, 45 proposals had been submitted in six Calls and 31 were approved for a total granted amount of €517,838. The uncertainties and difficulties of the COVID-19 pandemic may be one of the reasons affecting the reduced activity of the WGs during Phase X.

Successful proposals are listed below (the indicated timeframe often suffered delays due to the COVID-19 constraints):

1. **Allium, Cryopreservation and Documentation and Information WGs:** GARLI-CCS - Genotyping-by-sequencing of the European garlic collection to develop a sustainable *ex situ* conservation strategy. April 2023 – March 2025. (€59,997). Coordinator: Manuel Nagel, Germany.

This Activity, involving 21 partners from 15 countries and the World Vegetable Centre, aims to develop a conservation strategy for garlic genetic resources by genotyping ca. 1,800 accessions from European garlic collections. In this way, unique and duplicated accessions will be identified and prioritized for cryopreservation and for phenotyping in the frame of a core collection.

2. **Avena WG:** UMORPHEAS - Updated MORPHological dEscriptors for *Avena* Species. March 2020 – February 2022 (€15,000). Coordinator: Andreas Katsiotis, Cyprus.

Due to the COVID-19 pandemic, this Activity did not start until an online kick-off meeting was held on 11 March 2022. Partners made plans to update the IBPGR Oat descriptors, involving the widest possible global community. A selected number of diverse accessions were planted in the fields of the partner countries in autumn 2022 to test a core set of descriptors. The FAO-ITPGRFA Secretariat also attended the kick-off meeting and is offering their expertise for this initiative.

3. **Brassica WG:** EUBRASWILD – Capturing Brassica Wild Relatives Diversity in south-eastern Europe. October 2020 – August 2023 (Euro 20,000). Coordinator: Smiljana Goreta Ban, Croatia.

This Activity, involving partners from seven countries, held two online meetings, in November 2020 and March 2021. The aim is to improve the knowledge of the presence, distribution and diversity status of *Brassica* wild relatives in eastern and south-eastern Europe as well as to fill the gaps of Brassicaceae wild relative populations in the European genebanks and AEGIS. Samples of several species of wild Brassicaceae were collected in Albania, Croatia, Italy, Serbia and Slovenia and populations were monitored. Field characterization is ongoing. A publication on the collecting mission is in preparation for submission to 'Genetic Resources'.

4. **Berries WG:** EUROPE.BERRIES – Collaborative action for updating the documenting about berry genetic resources in Europe. January 2021 – June 2022 (€20,000). Coordinator: Monika Höfer, Germany.

The Activity involved partners from 15 countries. Two online meetings were held in April and September 2021. The objective was to improve the data quality of the inventories of berry genetic resources conserved *ex situ* and upload these data in EURISCO, as well as to develop specific technical guidelines for genebank management and select eligible accessions to be proposed to become part of AEGIS. The Activity was concluded in February 2023. Inventories of berry genetic resources of the partner countries were improved in quality and quantity and data will be provided to EURISCO. A first draft of crop-specific technical guidelines for genebank management of berry genetic resources was prepared. Posters and scientific papers were published and the first steps were made towards developing a long-term infrastructure for the conservation, characterization, documentation and utilization of genetic resources in berries.

5. **Cucurbits WG:** Cucurbitlocal – Exploitation of *Cucurbita* local germplasm for sustainable agriculture. February 2021 – September 2023 (€19,800). Coordinator: Maria Raffaella Ercolano, Italy.

The Activity involves four European countries and Tunisia. Two online meetings were held in February and October 2021. The aim is to improve the inventory of local genetic resources of *Cucurbita*, characterize and regenerate a set of accessions and test the agronomic performance of selected accessions in low-input management systems, and promote their use. Potential AEGIS

accessions were selected in Germany (flagged in EURISCO), Italy, Romania and Spain. Phenotypic evaluation has been made for *Cucurbita* accessions collected in Spain, Germany, Italy and Romania. The accessions have been characterized (including for drought tolerance) and regenerated, and data are being prepared for transfer to EURISCO.

6. **Documentation and Information WG:** GRIN-Global II – GRIN-Global Workshop 2021 for European Genebanks. September 2020 – February 2021 (€19,200). Coordinator: Ludmilla Papoušková, Czech Republic.

A training workshop was organized in Prague, Czech Republic, 18-21 October 2022, with 17 physical participants and additional 24 connected online. A GRIN-Global expert trainer was invited from USDA, as well as experts from EURISCO and the Crop Trust. Theoretical lectures and hands-on sessions were offered, explaining the functioning of GRIN-Global and other documentation systems.

7. **Grain legumes WG:** ExploDiv - Exploring of Grain Legumes diversity for sustainable European Agri-food Systems. March 2023 – November 2025 (€26,600). Coordinator: Creola Brezeanu, Romania.

This Activity involves partners from 11 countries with the aim to identify and secure the diversity of *in situ* grain legume genetic resources to sustain adaptive capacity for resilience to climate change.

8. **Grain legumes WG:** ForEva - Fostering the need of implementation of the ECPGR European Evaluation Network (EVA) on Grain legumes. March 2023 – April 2024 (€16,500). Coordinator: Creola Brezeanu, Romania.

The Activity involves partners from 18 countries and the ECPGR Secretariat, with the aim to lay the foundations for an EVA legume network, which will eventually ensure comprehensive characterization and evaluation of legume germplasm.

9. **Malus/Pyrus and Prunus WG:** FRUITTREEDATA - Improvement of Fruit Tree Data Inclusion in EURISCO. January 2022 – December 2023 (€29,975). Coordinator: Matthew Ordidge, United Kingdom.

The start of this Activity, involving partners from 15 countries, has been delayed, pending the termination of other activities of the *Malus/Pyrus* WG. It aims to increase and update the listing of available material within EURISCO and/or establish the reasons for the lack of inclusion of known material in national lists. It will also increase the phenotypic information within EURISCO and will try to identify clonal material held under different accession names within different countries. These objectives are prerequisites for the decision-making process to develop the AEGIS concept for the fruit tree field collections.

10. **Potato WG:** EURO-POTATOES - Get Potatoes United – Collaboration Action for Updating the Virtual European Potato Collection. March 2023 – August 2024 (€30,000). Coordinator: Veli-Matti Rokka, Finland.

The Activity involves partners from 18 countries with the aim to re-activate the Potato WG, to share data on local genotypes, analyze and standardize genotyping technologies and identify duplicates and variants in the European collections to eventually expand the number of potato accessions flagged in AEGIS.

11. **On-farm conservation and management and Wheat WGs:** Bidifferent – Chances for the conservation and re-cultivation of central European Binkel (club wheat) through a nutritional and genetic differentiation towards other wheat species. January 2022 – December 2023 (€37,180). Coordinator: Rudolf Vögel, Germany.

The Activity, which started with a kick-off meeting in July 2002, involves five countries from the Alpine region, aiming to determine which landraces belong to the 'Echter Binkelweizen' (*Triticum aestivum* subsp. *compactum*) gene pool. In fact, some accessions phenotypically look like Binkel but are currently counted to the common wheat. It also aims to find in which country/region

the climatic and soil conditions are most favourable for Binkel's future cultivation. Genotypes with resistance to different fungal diseases and abiotic stress situations will be selected so that the region of cultivation can be extended. On-farm conservation will be promoted through the qualitative analysis of the ingredients and bakery qualities, which will encourage local stakeholders (farmers, millers, bakers) to re-introduce Binkel in their processes.

12. **On-farm conservation and management and Wheat WGs: INWHEATORY** – Inventorying wheat on-farm diversity. April 2023 – November 2024 (€28,050). Coordinator: Lorenzo Raggi, Italy.

This Activity involves partners from 12 countries, aiming at promoting the creation of national inventories of wheat landraces, including relevant information to understand their diversity, their evolution on farm, as well as indications on their level of genetic erosion.

13. **Vitis WG: AEG-VIT-IS** – Enhancing quality and quantity of *Vitis* genetic resources in AEGIS. January 2020 – December 2020 (€12,000). Coordinator: Gregorio Muñoz, Spain.

The Activity was completed in December 2021. It involved 18 countries, holding an online meeting in November 2020. Guidelines were defined to select *Vitis* candidates for AEGIS. Lists of new candidates (ca. 75 in total) were prepared by a few countries. Partners agreed to work on the safety duplication of accessions and the preparation of genebank manuals. One manual was completed by JKI, Germany. Molecular profiles of 284 accessions from 11 countries were studied to verify identity and uniqueness. The analysis of the results is in progress.

14. **Vitis WG: Sylvestris** - Increasing the efficiency of conservation of *Vitis sylvestris* genetic resources in Europe. March 2023 – February 2024 (€25,520). Coordinator: Georgios Merkouropoulos, Greece.

This Activity involves partners from 15 countries, aiming to update and enrich the findings on wild grapevine (*Vitis vinifera* subsp. *sylvestris*) occurrence in Europe as a follow-up to the previous Grant Scheme Activity 'InWiGrape'.

15. **Wild species in genetic reserves (now 'Crop Wild Relatives') WG**: Inclusion of CWR sites in European *in situ* Network - Identification, preparation of applications and approval of sites to join the European *in situ* PGRFA conservation network. September 2019 – March 2021 (€15,000). Coordinator: Juozas Labokas, Lithuania.

This Activity, supported with funds from the German Ministry for Food and Agriculture, allowed the participation of ten WG members in the meetings of the EC-funded project Farmer's Pride (Santorini, Greece, October 2019 and online, June/July 2021). Participants took part in the preparatory discussion to define the criteria and identify sites for the *in situ* network of CWR, as well as to identify the steps needed to ensure the establishment and the governance structure of the network.

## 2.9 EURISCO

### 2.9.1 EURISCO coverage

Between January 2019 and April 2023, the number of accessions documented in EURISCO increased by 102,049, reaching 2,085,425 from 43 National Inventories and 407 institutions. In addition, phenotypic data for 9,565 new accessions were imported, reaching a total of 91,383 characterized accessions from 21 countries.

	Progress between 1 January 2019 and 30 April 2023	Countries that contributed to the progress
Documented accessions	+102,049	Several countries. In addition, passport data updates of > 500,000 accessions
Phenotypic data records	+ 435,709	Austria, Azerbaijan, Belgium, Czech Republic, Estonia, France, Germany, Greece, Italy, Latvia, Lithuania, The Netherlands, Nordic Countries, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Switzerland, The United Kingdom
DOI/PUIDs	+ 197,994	Armenia, Azerbaijan, France, Germany, Italy, The Netherlands, Romania, Slovenia

### 2.9.2. EURISCO development

In order to support several Crop WGs having expressed the need to provide additional information not included in the MCPD standard, an **extension for crop-specific passport data** was developed in 2019. The visualization of those data was implemented in the new prototype crop portal for forages (see below). The approach allows the WG Chair to define additional descriptors to the MCPD standard, which was not modified.

Starting in 2019, EURISCO offered to serve as a mediator in the Digital Object Identifier (**DOI registration process**), in close collaboration with the ITPGRFA, handing over the issued DOIs to the respective genebanks. So far, this service was used by the National Inventory Focal Points of Armenia, Azerbaijan, Romania and Slovenia.

The **taxonomic search function**, already implemented in 2018 was extended in 2019. This ensured that even typing errors lead to usable hits. The taxonomy extensions of EURISCO have been published in a short communication article in *Plant Genetic Resources* ('Advancement of taxonomic searches in the European search catalogue for plant genetic resources'

DOI: <https://doi.org/10.1017/S1479262119000339>).

In the frame of the ECPGR Grant Scheme Activity 'ImprovLoliumCol', a prototype for a new **forages crop portal** was developed in 2019 and extended in 2022. This portal allows users to search over different genera of forage crops. A search using passport data as well as phenotypic (C&E) data is possible. In addition to the classic search, it is also possible to search for accessions by selecting them on a map. Furthermore, various statistical information is offered. Separate data management by the ECPGR Forages WG is no longer necessary since the data displayed in this portal are provided directly by EURISCO in the background and automatically updated.

The **upload and update mechanism for passport data for National Focal Points (NFPs)** had to be revised and a PL/SQL implementation was chosen and implemented in 2020. The intranet interface was revised in 2021, making it more visually appealing and allowing a purely web browser-based upload of passport data.

The **upload/update mechanism for phenotypic data** was also revised in 2022. A completely web-based solution was developed and integrated into the EURISCO intranet. Third-party software and special firewall settings are no longer required.

A general revision of the **public EURISCO web application** took place with necessary technological updates and evaluation of useful functionalities based on users' feedback (e.g. combined searches of passport and phenotypic data, map-based selection, faceted search and search indices for scientific names and common crop names.). The new web application was made publicly available in spring 2022.

The development of the **EURISCO-EVA intranet**, funded by the German Federal Ministry of Food and Agriculture, as part of the project 'Implementation of the ECPGR European Evaluation Network (EVA) on wheat/barley and vegetable crops (carrot, lettuce and pepper)', was accomplished in 2021 and 2022. This database was designed to provide network partners access to all relevant experiment metadata and collected phenotypic data, facilitating analyses and compatibility with the EURISCO database, which should host the phenotypic data after the end of the project's embargo period (see below). The completed infrastructure is now available to existing and future EVA consortia.

Within the project 'Extension of EURISCO for Crop Wild Relatives (CWR) *in situ* data and preparation of pilot countries' data sets', funded by the German Federal Ministry of Food and Agriculture, the **adaptation of EURISCO for *in situ* CWR data** started in October 2022, with the aim to be completed during 2023. A data exchange standard was defined based on the document '[Principles for the Inclusion of CWR Data in EURISCO](#)' by van Hintum & Iriondo, 2022.

### 2.9.3 EURISCO training

The 2020 EURISCO training workshop had to be cancelled due to the COVID-19 pandemic. Since the situation did not improve much in 2021, a purely online training workshop was organized from 10–12 November 2021, with similar satisfaction of the participants as previously experienced in physical meetings. The training involved 24 participants and focused on the topics of passport and phenotypic data, data quality and DOIs. The workshop report is available [here](#). A second physical training workshop is planned in autumn 2023.

### 2.9.4. Public awareness about EURISCO

The EURISCO Coordination has made various efforts to raise awareness of EURISCO in the community through several presentations at various national and international meetings, webinars and publications. Full lists are available from the ECPGR Annual Reports. The EURISCO Newsletter was also regularly distributed and is available online from the EURISCO website ([https://eurisco.ipk-gatersleben.de/apex/eurisco\\_ws/r/eurisco/newsletter](https://eurisco.ipk-gatersleben.de/apex/eurisco_ws/r/eurisco/newsletter)). An article describing recent EURISCO developments was published in NAR's prestigious annual database issue in early 2023 (DOI: <https://doi.org/10.1093/nar/gkac852>).

### 2.9.5 EURISCO Advisory Committee

The third EURISCO Advisory Committee meeting was held online on 7 July 2021 (minutes [here](#)). The discussion focused on two data domains that were not included in EURISCO but deserving attention in the future, i.e. data related to *in situ* material and material under development (e.g. lines within accessions, often with their own DOI). The extension of EURISCO to host CWR *in situ* data was then followed up, through a project funded by the German Ministry for Food and Agriculture (see below, Section 3.6). Within the framework of this project, the Advisory Committee was involved in commenting and eventually endorsing the document 'Principles for the inclusion of CWR data in EURISCO', which is being used to define the relevant data standards.

Regarding information related to Single Seed Descent (SSD) lines and other derived material, it will be necessary to further explore the various options and develop possible scenarios to be evaluated before making a recommendation, such as in the framework of the AGENT project.

### 2.9.6 EURISCO Data Sharing Agreement

The original EURISCO Data Sharing Agreement (DSA) expired in December 2020. A new DSA, renewing the formal agreement for data sharing between the Alliance of Bioversity International and CIAT and the countries contributing data to EURISCO was approved by the Alliance legal office and sent for signature to all the EURISCO National Inventory Focal Points. By April 2023, 22 out of 43 countries had sent back their signed copy.

## 2.9.7 Participation in project consortia

The EURISCO coordination participated in five successful Horizon 2020 projects, aiming at acquiring additional funding for developing certain aspects of EURISCO: EUCLEG, Farmer's Pride, GenRes Bridge, AGENT and PRO-GRACE, mainly involved in work packages aiming at the development of guidelines and data standards, of the infrastructure for managing and analyzing genotypic and phenotypic data, and at inventorying PGR-related systems and information standards.

Within the framework of the European Evaluation Network (EVA), thanks to a grant from the German Federal Ministry of Food and Agriculture, the EURISCO Coordination acquired a developer position through which the extensions to the EURISCO infrastructure necessary for EVA could be made.

## 2.10 AEGIS

### 2.10.1. AEGIS membership and status of the European Collection

In April 2023, a total of 70,426 accessions from 21 contributors were part of the European Collection.

During Phase X, until now the European Collection has increased by 23,377 accessions (ca. 50% increase compared to the end of Phase IX). During this period, four countries contributed accessions for the first time (Belgium, Italy, Portugal and Slovenia). One new country (Serbia) joined in 2019, bringing the number of member countries to 35, while the associate member institutes' agreements increased to 68, with the addition of three institutes from Italy, Lithuania and Portugal. The changes in the composition of the European Collection since 2018 are shown in Table 3 below.

**Table 3.** The European Collection: breakdown by contributors

Contributor	No. of accessions flagged as AEGIS		
	by end 2018	by April 2023	Difference
1. Albania	8	8	-
2. Belgium	0	2	+2
3. Bosnia and Herzegovina	22	29	+7
4. Bulgaria	341	391	+50
5. Croatia	90	90	-
6. Czech Republic	1,341	1,695	+354
7. Estonia	126	134	+8
8. Germany	26,841	37,220	+10,379
9. Italy	0	10,917	+10,917
10. Latvia	27	27	-
11. Lithuania	36	45	+9
12. Montenegro	31	31	-
13. The Netherlands	5,845	5,840	-5
14. Nordic Countries	3,706	4,785	+1,079
15. Poland	443	443	-
16. Portugal	0	86	+86
17. Romania	623	752	+129
18. Slovakia	299	640	+341
19. Slovenia	0	21	+21
20. Switzerland	5,611	5,611	-
21. United Kingdom	1,659	1,659	-
<b>Total</b>	<b>47,049</b>	<b>70,426</b>	<b>+23,377</b>

### 2.10.2. Follow-up to the AEGIS Workshop *Assessing current practices and procedures to strengthen AEGIS*

A list of Action Points was agreed upon during the workshop held from 10–12 December 2018 in San Fernando de Henares, Madrid, Spain (published as a standalone document on the ECPGR website [here](#)). These were followed up as described below:

### Improving functioning and understanding of AEGIS

A Checklist for the implementation of the AEGIS Memorandum of Understanding (MoU) at the national level with a step-by-step flow diagram was prepared and published [here](#), detailing the procedure to be followed. The simplified flagging procedure agreed upon in Madrid was explained in this document.

The section on AEGIS membership on the website was improved, providing an individual page to each Associate Member (accessible from [here](#)), with general information about the Member Institute, direct access to existing relevant documents (operational genebank manuals, peer-review reports etc.), and a full list of accessions included in the European Collection. This improvement was enabled thanks to funds provided by the German Federal Ministry of Food and Agriculture.

A table for estimation of genebank operation costs was provided to all Associate Members.

An opinion paper on AEGIS was published in the journal *Plants*:

Van Hintum T, Engels JMM, Maggioni L (2021). AEGIS, the Virtual European Genebank: Why it is such a good idea, why it is not working and how it could be improved. *Plants* 10, 2165. <https://doi.org/10.3390/plants10102165>

### AQUAS – The AEGIS Quality System

The recommended genebank 'peer review' proof of concept was tested under the coordination of CGN, The Netherlands. The concept consists of visiting and reviewing each other's genebanks as a way of improving the quality of genebanks. After each visit, a report is written with observations and recommendations. The first cycle of mutual visits involving three genebanks (COMAV, Spain; CGN, the Netherlands and IHAR-PIB, Poland) took place as part of the GenRes Bridge project in early 2019. An additional cycle of peer-review visits was planned as part of the AGENT project, involving ten genebanks. In 2022, two rounds of in-person genebank review visits were conducted, involving CRI (Czech Republic), IPK (Germany), NPPC (Slovakia), INIA (Spain), CGN (the Netherlands) and IPGR Sadovo (Bulgaria). As part of this exercise, new genebank manuals were completed (IPGR, Bulgaria) (CRI, Czech Republic, RIPP, Slovakia and CRF, Spain) or updated (CGN, The Netherlands) and published online. In 2023 and 2024 other peer-review rounds will involve CREA-CI (Italy), NordGen (Nordic countries), IHAR (Poland), WBF (Switzerland) and RBGK (United Kingdom).

Reports from the reviews are made available on the AEGIS website ([here](#)).

### Vegetatively propagated crops

Within the framework of the Horizon 2020 project GenRes Bridge, the ECPGR Secretariat organized an online workshop on *Phytosanitary barriers for genetic resources* in February 2021, to raise awareness among genetic resources stakeholders and initiate a discussion on phytosanitary issues relevant to genetic resources conservation and sustainable use. The topic is particularly relevant, considering that quarantine pests and diseases prevent the exchange of AEGIS material. Potential collaborative actions were identified to move towards increased safety with appropriate and ideally harmonized protocols. The results of the workshop ([here](#)) were communicated to the regulatory agencies for further cooperation.

### Legal matters

At the Madrid workshop in 2018, France had announced that they could join AEGIS through a Declaration of Intent (DoI), rather than the standard Memorandum of Understanding. This process was nearly concluded by April 2023 with the drafting of a DoI related to AEGIS, whereby France would participate in AEGIS through French institutions that would sign a Cooperating Associate Membership Agreement with the French National Coordinator. The document received the approval of the Steering

Committee and only final signatures from the French authorities remained pending. It is expected that Spain might use a similar procedure to join AEGIS.

### Funding AEGIS

The main action was dedicated to including AEGIS as the *ex situ* pillar within the PGR Strategy, developed within the framework of the GenRes Bridge project. The expectation is that the co-funding from external donors and/or the EC may follow in recognition of the value of the system.

## 2.11 Communication and public awareness

During 2019, the ExCo worked towards the finalization of the ECPGR Communication and Public Relations Strategy, including 'Vision' and 'Mission' statements, for which a contest was organized among the National Coordinators to suggest better wording. The strategy was eventually approved and published on the ECPGR website in January 2020 ([here](#)).

A task force (TF) was then set up to help in the preparation of a video on ECPGR, to celebrate 40 years of ECPGR activity ('Jubilee Video'). The TF was coordinated by Marianne Lefort with inputs from the Secretariat and including Marc Lateur, Pavol and René Hauptvogel, and Jens Weibull. Ewa Hermanowicz (communication officer of EUFORGEN) also kindly joined the TF as an external expert. The UK company Duckrabbit was selected for the production after a competitive bidding process, and Lina Weibull was contracted as a consultant to serve as an intermediary between Duckrabbit and the Task Force/ECPGR Secretariat. Marc Lateur was selected from four candidates as the main character/narrator of the public awareness story and the video was recorded in Belgium in September 2020. The video was released in March 2021 (watch [here](#)). It recorded 1,200 visualizations in two years and it was shown at the event of the launch of the Genetic Resources Strategy for Europe, 29-30 November 2021, Brussels, Belgium.

The ECPGR Secretariat was enabled to dedicate more effort to communication, public awareness and dissemination activities after a new position of 'Editing and Communication Specialist' was filled by Nora Capozio in November 2021.

Roll-up banners on AEGIS, ECPGR, EVA and *Genetic Resources* journal have been prepared and brought to relevant events. The layouts have been made available for download should any national programme wish to print the same for use at local events.

As part of the package accompanying the launch of the Plant Genetic Resources Strategy for Europe, a webinar was organized, presenting the Strategy to the ECPGR Steering Committee, and is available [here](#). A policy brief was also prepared: *Plant genetic resources conservation and sustainable use – What should Europe urgently do?* [\[link\]](#)

The development of ECPGR brand guidelines and a refresh of the ECPGR branding products (letters, reports, documents and presentations), with a new and fresh style in line with the original colours and logos, were carried out.

With the aim to increase awareness of the ECPGR community about the achievements obtained through the Grant Scheme activities, a series of short webinars was started in 2023 with two dates dedicated to the results of the activities 'ImprovLoliumCol' (Forages and Documentation & Information WGs) and 'SafeAlliDiv' (*Allium* WG). WG members from all the ECPGR WGs and SC members regularly receive the invitation to the webinars, which are recorded and remain available on the web site. The series is planned to continue in the second half of 2023.

All ECPGR communication products are made available from a dedicated web page ([here](#)).

## 3. German-funded projects

The German Federal Ministry of Food and Agriculture (BMEL) provided several voluntary contributions, in the form of bilateral agreements with Bioversity International, on behalf of the ECPGR

Secretariat. These were conducive to advancing various aspects of the ECPGR objectives. A few agreements were already running during the previous Phase IX and were completed in Phase X. Others were newly established during Phase X. All these agreements are briefly listed and summarized below, including their achievements and current status.

### **3.1 European Genetic Resources (GenR 2017-3)**

This project ran between April 2017 and September 2019, with a total budget of €105,035. The project supported four ECPGR activities that were positively evaluated by the ExCo under the Third and Fourth Calls for proposals of the ECPGR Activity Grant Scheme, during Phase IX. The four Activities were the following: 'EURISCO Training 2017', 'GRINGlobal', 'Pomefruit C&E' and 'CarrotDiverse'. The ECPGR Documentation and Information WG carried out two EURISCO training courses involving National Inventory Focal Points from 19 countries, thus extending to more than half of the network's partners the updated skills for data provision to EURISCO. The training provided on GRIN, in collaboration with USDA and Crop Trust trainers, has widened the awareness of several genebanks about the possibility to adopt this internationally supported documentation management system. The *Malus/Pyrus* WG has been successful with testing, refinement and agreement on two new documents providing methods and descriptor lists for the characterization and evaluation of apple and pear genetic resources. Compilation and harmonization of very large sets of existing and newly produced SSR data for over 1,300 apple and nearly 5,000 pear accessions were carried out. Data analysis identified ca. 2,000 unique pear genotypes and provided the methodology to distinguish new from duplicate genotypes in future analysis. The Umbellifer Crops WG focused on wild relatives with field tests carried out in three locations. Genetic data have shown clear clustering of the analyzed accessions into groups of common geographic or taxonomic origin. The bioassays for disease resistance detected promising accessions affected by lower disease severity compared to the controls. New tests on germination protocols gave good indications on the possibility to improve germination of wild material, which is a key factor for the efficient long-term conservation of carrot wild relatives in genebanks and their use.

### **3.2 Strengthening the European Genebank Integrated System 'AEGIS' (GenR 2018-1)**

This project ran between September 2018 and February 2019, with a total budget of €68,881, to implement the recommendation made by the ECPGR Steering Committee in its 15th meeting in Thessaloniki, Greece (May 2018) to organize a workshop dedicated to AEGIS. The purpose was to increase awareness among National Coordinators and other stakeholders, promote good examples of positive engagement, reflect on and find solutions for the slow progress, and facilitate AEGIS activities during Phase X. A simplification of the mechanism to define accessions for AEGIS was agreed and subsequently embedded in a flow diagram. France declared during the meeting that an appropriate solution (drafting of a letter of intent) would enable its membership in AEGIS, and Spain was considering following suit on the French steps. Serbia joined AEGIS a few months after the workshop. Regarding the implementation of AQUAS elements, the workshop promoted the testing of the proof of concept of a peer-review approach, which was then successfully tested within the framework of the EU-funded GenRes Bridge and AGENT projects. Recommendations for a better-structured and informative AEGIS website were implemented through this project, providing the means for better management and monitoring of the genebank system.

### **3.3 Organization of an ECPGR workshop for the establishment of a European Evaluation network (EVA) on wheat and barley and a vegetable crop (GenR 2018-3)**

This project ran between September 2018 and April 2019, with a total budget of €39,580. Following up on the ECPGR Steering Committee agreement in May 2018 on the Establishment of the European PGRFA Evaluation Network (EVA), this project acted as a bridge between the preparatory phase for the establishment of the European Evaluation Network and a subsequent implementation phase in which specific networks could start operating. During the two workshops organized (for [wheat and barley](#) in Berlin, Germany, November 2018 and for [vegetables](#) in Durres, Albania, April 2019), the Evaluation Network concept demonstrated to be sufficiently appealing to convince most of the attending breeders and genebank managers that it would be worthwhile to set up a project in which private breeders confirmed their availability to undertake field evaluation at their own cost. A project proposal, based on the recommendations of the workshops was prepared for submission, leading to the approval of a new project (see below, GenR 2019-2).

### **3.4 Implementation of the ECPGR European Evaluation Network (EVA) on wheat and barley and vegetable crops (carrot, lettuce and pepper), with the addition of a maize component and improved access to existing barley, wheat and maize evaluation data (GenR 2019-2)**

This project started in July 2019 and is due to terminate in December 2024, with a total budget of €1,001,726. The project is supporting the implementation of the European Evaluation Networks on wheat, barley, carrot, lettuce, pepper and maize and also helped to incorporate existing C&E data on wheat, barley and maize in EURISCO. The project applies a public–private partnership approach involving genebank managers, public and private breeders, in order to foster partnerships and strengthen the link between conservation and use of PGRFA. The evaluation network consortia were formalized through the signature of Letters of Commitment by the partners and specific Cooperation Agreements were finalized for each crop network. Genebank accessions are multiplied and then distributed to partners who carry out evaluations in multiple environments (field, greenhouse and lab), mostly at their own cost for two years. Jointly agreed evaluation protocols and data collection standards are used. All accessions are genotyped and the phenotypic and genotypic data are analyzed by the partners. Intranet platforms for each consortium are established within a dedicated EURISCO-EVA intranet environment where data are accessible only to partners during an embargo period of three years. During the project, the work plan foresees the evaluation of up to 2,000 wheat, 1,700 barley, 617 maize, 60 carrot, 227 lettuce and 180 pepper accessions. Overall, by April 2023, the number of active participants was 90 partners from 28 countries. Of these, 47 are private breeding companies ranging in size from small cooperatives to medium and large multinationals. In total, 81 partners in the various networks provided more than 144 different environments (field sites) for the evaluation of crop accessions, performing more than 300 trials. While a detailed analysis of the generated wealth of data has only been started, initial results from different networks already identified useful germplasm that may be introduced into breeding programmes to develop new varieties with improved characteristics and resilience to the effects of climate change. Data from extensive genotyping of genebank accessions also provided valuable information on the diversity of European germplasm. Furthermore, novel genotyping tools were developed to facilitate future evaluation projects for some crops.

Thanks to this project and complementary funding from the AGENT project (see below), EVA has made considerable progress and made ECPGR for the first time very active in the area of use of genetic resources, strengthening collaboration with breeders and other users. **The SC may wish to consider the consolidation of the position of EVA Coordination as well as the creation of a specific budget line to ensure a longer continuation of the experience into Phase XI. Also, the establishment of an**

**EVA 'Steering Unit', as foreseen in the establishment document, still needs to be implemented and might be useful.<sup>1</sup>**

### **3.5 ECPGR meetings and public awareness activities (GenR 2019-5)**

This project ran between September 2019 and May 2020, with a total budget of €60,387. The project supported ECPGR meetings, particularly the first meetings of two new WGs, on Berries and Maize. This has enabled the new WGs to become active at the start of Phase X of ECPGR and agree on dedicated work plans. The Maize WG has particularly benefited from the timing of the meeting, which was conducive to submitting a successful proposal to the German donor for the addition of a maize component to the EVA Network, granted in December 2019 (see 3.4). Also, the Berries WG has used the ECPGR interaction to get organized towards submitting a project proposal ('Breeding Value') to Horizon 2020, eventually also successful. The opportunity to hold the 15th meeting of the ExCo in Svalbard offered a precious occasion to interact with the global PGR community and experience in person the physical and symbolic value of the Global Seed Vault, as well as to conclude a framework of cooperation with the signature of the MoU between ECPGR and the Crop Trust. A relevant input to the public awareness activities of ECPGR was the preparatory work enabled by this project for the production of the so-called 'Jubilee Video' of ECPGR.

### **3.6 Extension of EURISCO for Crop Wild Relatives (CWR) *in situ* data and preparation of pilot countries' data sets (GenR 2021-1)**

This project started in November 2021 and is due to terminate in December 2023, with a total budget of €247,318. The project intends to endow the European region with a centralized, public and web-searchable inventory of passport data for *in situ* CWR priority populations that can be made in principle accessible to users. A document setting the principles for the inclusion of CWR Data in EURISCO was endorsed by the partners and the EURISCO Advisory Committee in April 2022 and will be used as a standard for data transfer from National Inventories of *in situ* CWR populations to EURISCO. The list of partners includes Albania, Bulgaria, Cyprus, the Czech Republic, Germany, Italy, Lithuania, the Netherlands, Portugal, Spain and the United Kingdom. These are the pilot countries that are in the process of identifying priority taxa and populations, preparing the national database structure, organizing the national network of data providers, collecting and organizing the data according to the agreed principles and data exchange format and eventually providing the data to EURISCO. Other countries will be encouraged to join the effort. The FAO-ITPGRFA Secretariat has also been involved in the early stages of the project to help in the definition of the data exchange standards.

## **4. Participation in Horizon 2020 projects**

The ECPGR Secretariat contributed as a partner to various consortia preparing project applications for funding under the Horizon 2020 work programmes SFS-28-2018-2019-2020 and INFRA-2022-DEV-01-01. In a few cases, the projects were not successful: 1) Greenbooster (Boosting Genetic Resources Approaches and Tools for Future Plant Pre-Breeding Needs); 2) WiCaLoMix (Unlocking Wild Cereal and Legume diversity) and 3) BerryValue (Adding value to berry genetic resources).

Three projects were successful as listed below:

### **GenRes Bridge (Joining forces for GenRes and biodiversity management) (2019–2022)**

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<sup>1</sup> "A Steering Unit of no more than 8 experts appointed by the Steering Committee of ECPGR in consultation with the private sector, which will provide overall policy guidance for EVA"

[ECPGR budget: €210,613]

This Coordination and Support Action approved for funding at the end of 2018 ran for three years (2019–2021). The project, coordinated by the European Forest Institute, Finland, was jointly prepared by the three European networks on plant, forest and animal genetic resources – ECPGR, the European Forest Genetic Resources Programme (EUFORGEN) and the European Regional Focal Point for Animal Genetic Resources (ERFP) – to respond to the 2018 call on ‘Joining forces for GenRes and biodiversity management’ (SFS-28-2018-2020). The ECPGR Secretariat, with support especially from the ExCo Chair and the German national coordination office, contributed to the development and finalization of the *Genetic Resources Strategy for Europe* (GRSE). The Secretariat was also involved in the organization of stakeholders’ meetings (namely the ‘Sharing perspectives workshop’, 28–30 October 2019 in Tuusula (Helsinki), Finland, and the online feedback workshop on the draft GRSE, 24–26 November 2020), as well as to several rounds of consultations and revisions resulting in a document endorsed by the Steering Committees of the three networks. The GRSE was complemented by three domain-specific strategies on animals, forests and plants. The *Plant Genetic Resources Strategy for Europe* was finalized as a joint effort of an ECPGR drafting team, composed of nine volunteers from National Coordination offices including ExCo members. The strategies were presented to the European Commission and genetic resources stakeholders during a hybrid in-person and online launch event on 30 November 2021 in Brussels, Belgium. Since the beginning of 2022, an initiative started under the French Presidency of the European Union, to raise policymakers’ awareness of the need expressed by the strategies for urgent change action on genetic resources conservation and sustainable use (the ExCo Chair, the German National Coordination Office and the Secretariat were active in this). The same initiative continued under the Czech and Swedish Presidencies and is being passed to the upcoming Spanish Presidency, with continuing efforts to maintain the recommendations of the GRSE on the agenda of the Working Party on Genetic Resources and Innovation in Agriculture.

The ECPGR Secretariat also organized an online workshop on [Phytosanitary barriers for genetic resources](#) in February 2021, to initiate a discussion on phytosanitary issues relevant to genetic resources conservation and sustainable use.

Finally, the ECPGR Secretariat was also leading the specific project task of developing the journal *Genetic Resources* ([www.genresj.org](http://www.genresj.org)), which was launched in 2020. The journal was inspired by the example of the *Plant Genetic Resources Newsletter*, jointly published by FAO and Bioversity International (IPGRI), and the *Animal Genetic Resources journal*, edited by FAO, discontinued in 2009 and 2016, respectively. The journal, which is published by Bioversity International on behalf of ECPGR, and is overseen by an international editorial team, intends to offer free publishing and free online access, disseminating global knowledge and tools used by the community of practitioners of plant and animal genetic resources involved in monitoring, collecting, maintaining, conserving, characterizing and using genetic resources for food, agriculture and forestry. The journal has a focus on the European region and welcomes contributions of wider interest from all world regions. The ECPGR Secretariat provides the editorial office. *Genetic Resources* published so far seven regular issues between 2020 and 2023, including 41 contributions from all three genetic resources domains and a special issue, the abstract book for the *International Congress on the Breeding of Sheep and Goats* (Bonn, Germany October 2020), which was edited in collaboration with the German Ministry of Food and Agriculture. After the end of the GenRes Bridge project, starting in 2022 ECPGR and ERFP are ensuring the continuation of the journal through their support. ECPGR has provided in-kind the editorial management, copyediting and production and covered the fixed costs of the web publishing platform (ca. €3,000 per year). ERFP agreed to contribute €10,000 in 2023. **The continuation of the journal as a valuable service to the stakeholders during Phase XI can be ensured as long as the two positions of ‘EVA Coordinator & GenResJ managing editor’ and ‘Editing and Communication Specialist’ will be consolidated in the Phase XI Budget, as well as by the continued support of ERFP.**

This project covered Secretariat staff costs in the range of €111,000.

### **AGENT (Activated Genebank Network) (2020–2025)**

[ECPGR budget: €276,825]

This five-year Research and Innovation Action, submitted under SFS-28-2019 B: Adding value to plant Genetic Resources (GenRes), was approved in 2019 and started in May 2020. The project, coordinated by the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany, focused on wheat and barley, is a concerted effort to activate genebanks to make genetic resources more easily accessible to breeders and farmers through standardized protocols of data generation, documentation and provision to users. The ECPGR Secretariat is leading one Work Package to promote use, sharing of resources, capacity building, and communication and dissemination of results. More specifically, AQUAS reviews of operations of European genebanks to guide their improvement are planned to involve ten partner genebanks in a system of reciprocal visits and support. Training courses are organized to bring genebank managers up to the state-of-the-art regarding all innovative aspects of genebank management, including genomics and data management tools developed in the project. This Work Package also supports the development of the ECPGR EVA Network, enhancing the range of stakeholders and environments involved in producing evaluation data from value-added genotyped genetic material. A network of Italian farmers (*Rete Semi Rurali*) is also involved in the Evaluation Network and has been provided with genebank accessions suitable for testing in organic farming conditions. Thanks to AGENT, the EVA Wheat and Barley network is extending its activities until 2024, with a third set of accessions provided by AGENT partners that undergo multiplication and multi-environment evaluation through the EVA public-private partnerships.

The project covered Secretariat staff costs in the range of €144,500.

### **PRO-GRACE (Promoting a Plant Genetic Resource Community for Europe) (2023–2025)**

[ECPGR budget: €185,000]

This 30-month project awarded under the Call HORIZON-INFRA-2022-DEV-01-01 (Research infrastructure concept development), is coordinated by ENEA, Italy and started in January 2023. The ECPGR Secretariat is one of 31 partners in this project, aiming to develop the concept for a European Research Infrastructure (GRACE-RI) dedicated to PGR, along the lines of the Plant Genetic Resources Strategy for Europe. The ECPGR Secretariat will be leading (jointly with NordGen) a work package on 'Research Infrastructure concept, social and regulatory aspects, governance, and financial plan' and will also develop the project website. Apart from building the concept for a research infrastructure, this project is expected to bring forward various elements of the PGR Strategy. For example, the project intends to develop a number of documentation standards for phenotypic, genetic, *in situ* and on-farm data and a quality certification system including methods and standards for all aspects of genebank operation. Moreover, it will develop crop-specific methods for crop evaluation. The consortium established with PRO-GRACE will intend to submit further proposals to follow-up with the next steps leading to the creation of a research infrastructure.

The project covers Secretariat staff costs in the range of €135,000 that will be used to hire a temporary Research Specialist for two years.

The ECPGR Secretariat has also been involved in other Horizon 2020 project during Phase X, as a member of the Scientific Advisory Committees, as follows:

#### **Farmer's Pride – 'Networking, partnerships and tools to enhance *in situ* conservation of European plant genetic resources' (2017–2021)**

A Coordination and Support Action coordinated by the University of Birmingham, UK. The ECPGR ExCo Chair (Eva Thörn) was a member of the Advisory Group. The project involved both Chairs of the

WGs on ‘Wild species conservation in genetic reserves’ (now ‘Crop Wild Relatives’), Nigel Maxted, and on ‘On-farm conservation and management’, Valeria Negri.

A number of Farmers’ Pride achievements were made accessible from the ECPGR On-farm Conservation and Management WG website ([here](#)), including guidelines for *in situ* landrace propagation, management and access, a best practice evidence-based database on *in situ* landraces and other products and reports. The project’s final conference *Ensuring Diversity for Food and Agriculture – Plant genetic resources in nature and on-farm* was organized in association with EUCARPIA – Genetic Resources Section, and ECPGR, and held from 28 June–1 July 2021, online.

#### **BRESOV – ‘Breeding for Resilient, Efficient and Sustainable Organic Vegetable Production’ (2018–2023)**

Coordinated by the University of Catania, Italy, the project aimed to tackle the nutritional challenges of a growing world population and changing climatic conditions by enhancing the productivity of different vegetable crops in an organic and sustainable farming infrastructure. BRESOV worked on broccoli, snap bean and tomato. The ECPGR Secretariat was represented on the scientific advisory board by the EVA Coordinator, Sandra Goritschnig. In this context, the idea was promoted to establish an EVA Legumes network through a Grant Scheme activity (ForEVA).

#### **Dynaversity – ‘Conserving Diversity *in situ* in agriculture and in the food chain’ (2019–2021)**

A Coordination and Support Action coordinated by ARCADIA International, Belgium. The project analyzed and described the actors involved in plant genetic conservation for agriculture to suggest management and governance models and construct new forms of networking. It facilitated exchange and integration of scientific as well as practical knowledge on how to best manage diversity in agriculture and in the entire food chain, restoring evolutionary and adaptation processes. As member of the Sharing Knowledge and Experience Platform (SKEP), with advisory function, the ECPGR Secretary, Lorenzo Maggioni contributed to commenting desk studies produced by the project.

#### **BrasExplor – Wide exploration of genetic diversity in *Brassica* species for sustainable crop production (2020–2023)**

The project, coordinated by INRAE, France, aims to identify relevant material of *Brassica rapa* and *Brassica oleracea* and their adaptive traits to face upcoming climate change in the Mediterranean area, and contribute to biodiversity-based agriculture. The ECPGR Secretary, L. Maggioni, was invited to be part of the Advisory Board.

#### **INCREASE – Intelligent Collections of Food legumes Genetic Resources for European Agrofood Systems (2020–2025)**

The project, coordinated by Università Politecnica delle Marche, Italy, aims at improving the sustainable use of plant genetic resources by enhancing the status of chickpea, common bean, lentil and lupin genetic resources. The ECPGR Secretary, as stakeholder of the project, presented the ECPGR’s work, the Plant Genetic Resources Strategy for Europe and the EVA network at a project’s workshop in 2022.

#### **BreedingValue – Pre-breeding strategies for obtaining new resilient and added value berries (2021–2024)**

This project, coordinated by the Università Politecnica delle Marche, Italy, focuses on berries (strawberry, raspberry and blueberry) to identify conserved germplasm appropriate for sustainable berry production throughout the EU. It will apply the latest genotyping and phenotyping tools for the characterization of local

varieties. The ECPGR Secretary, L. Maggioni, was invited to be part of the Advisory Board. Also S. Goritschnig contributed to a project's workshop in 2023, with a presentation on the EVA experience with public-private partnerships.

Finally, the ECPGR Secretariat is partner in the project proposal HORIZON Call CL6-2023-BIODIV-01-13 – Crop Wild Relatives for sustainable agriculture. The project proposal '**Effective and Efficient Conservation and Use of Crop Wild Relative Genetic Diversity to Sustain European Agriculture**' (EURO-CWR), coordinated by the University of Birmingham, UK, was submitted for funding in March 2023. The objective is to create a self-sustaining, multi-actor platform to conserve and use European crop wild relative (CWR) diversity, promote climate change resilience, and help ensure long-term sustainability for agriculture in Europe. The ECPGR Secretariat is one of 43 partners, leading the dissemination, exploitation and communication work package and is involved in the evaluation of CWRs as part of the existing EVA networks, as well as a broker for the establishment of a regional *in situ* network.

## 5. Liaising with partner organizations

### 5.1 Euroseeds

After the signature in May 2018 of a Memorandum of Understanding for enhanced cooperation with the European Seed Association (now Euroseeds), support from the Euroseeds Secretariat continued to facilitate participation of private breeders in the EVA Networks, as well as to help finalize the cooperation agreements with the EVA partners. Szonja Csörgő (Euroseeds Director IP & Legal Affairs) has also been member of the External Advisory Board of the GenRes Bridge project and member of the Task Force dedicated to the European Coordination and Information Centre for conservation and sustainable use of agricultural genetic resources (ECIC) (see below, Section 5.4).

### 5.2 ITPGRFA Secretariat

Within the framework of the Memorandum of Understanding of December 2016, the ECPGR Secretariat had several interactions with the ITPGRFA Secretariat. In particular, ECPGR participated in the meetings of the Scientific Advisory Committee on the Global Information System (GLIS) of Article 17, dealing with the Global Information System on PGRFA. ECPGR also promoted and supported the adoption of DOIs by genebanks in Europe, by presenting the importance of the DOIs in documentation training workshops and other occasions. Furthermore, as of May 2019, EURISCO started offering a service aiming at supporting data providers with registering germplasm accessions for a DOI using GLIS (in collaboration with the ITPGRFA Secretariat). Circulation by the ITPGRFA Secretariat in October 2019 of a document regarding the 'Development and Promotion of Crop Descriptors Lists', triggered collaboration with the ECPGR *Avena* Working Group for a revision of the IBPGR Oat descriptors. More recently, the ITPGRFA Secretariat has been invited as an observer to the EURISCO Advisory Committee meeting in 2021. In 2022, the ITPGRFA Secretariat contributed comments to the document 'Principles for the Inclusion of Crop Wild Relative Data in EURISCO' and expressed interest and support for creation of the Cryopreservation WG. The ITPGRFA Secretariat served as leader and coordinator of the initiative of a group of donors, including ECPGR, in support of the Ukrainian genebank.

### 5.3 Crop Trust

In February 2020, on the occasion of the Global Seed Vault (GSV) celebration in Svalbard, Norway, a Memorandum of Understanding for an Enhanced Cooperation was signed with the Crop Trust to formalize future cooperation to improve the conservation and documentation of PGRFA and to facilitate their use as a contribution to a global system of conservation and use. Interactions with Crop Trust staff have been regular and directed to exchange information. In October 2019, the ECPGR Secretary participated in an expert consultation meeting on global conservation strategies, organized by the Crop Trust, and subsequently contributed to identifying European contacts for the sunflower strategy. ECPGR WG members contributed to the preparation of strategies on *Brassica*, *Capsicum*, cucurbits, eggplant, pea, potato and temperate forages. Collaboration has been ongoing to exchange information and offer support to the Ukrainian genebank affected by the war.

### 5.4 European Regional Focal Point for Animal Genetic Resources (ERFP)

As a follow-up to the inter-networks collaboration undertaken during the implementation of the GenRes Bridge project, a Task Force was established with representatives of ECPGR (Secretariat, ExCo Chair, German National Coordination Office and Euroseeds) and the European Regional Focal Point for Animal Genetic Resources (ERFP), dedicated to promoting the implementation of the genetic resources strategies at national and European level and, specifically, to brainstorming about ways and

options to establish the European Coordination and Information Centre for conservation and sustainable use of agricultural genetic resources (ECIC). The Task Force held three meetings between 2022 and 2023, where lobbying efforts were discussed, leading to support ongoing initiatives by the French, Czech and Swedish Presidencies of the EU to maintain the topic of the genetic resources strategies high in the agenda of the Working Party on Genetic Resources and Innovation in Agriculture. Following an analysis of the existing legal framework made by Szonja Csörgö, Euroseeds, and Jeanne Bormann, from the Administration of Technical Agricultural Services (ASTA), the Task Force was in agreement that the establishment of a Platform/Observatory as a loose structure to coordinate knowledge gathering and sharing activities on agricultural genetic resources at regional level could be a realistic first step towards the establishment of ECIC and the implementation of the Genetic Resources Strategy for Europe. The right steps to move in this direction are not immediately evident, but it is clear that political initiative from the Committee of Permanent Representatives (COREPER) and the Parliament would be necessary, based on a strong justification. A Council Conclusion or Resolution and a European Parliament recommendation would be the first necessary targets.

Collaboration between ECPGR and ERFP is ongoing for the joint support to the *Genetic Resources* journal, as explained in Section 4.

## 6. ECPGR Objectives – status of implementation

See in [Background Documents](#): Table of ECPGR objectives, with annotated activities and indicators

## 7. Financial situation

See in [Background Documents](#): ECPGR Financial report 2022

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Lorenzo Maggioni  
ECPGR Secretary

(with inputs from Nora Capozio, Sandra Goritschnig, Marianne Lefort and Stephan Weise)

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The Alliance of Bioversity International and CIAT, Via di San Domenico 1 – 00153 Rome, Italy

Tel: (+39) 06 6118 231; Email: l.maggioni@cgiar.org