



European Cooperative Programme for Plant Genetic Resources (ECPGR)

Phase IX (2014–2018)

**Annual Progress Report
January-December 2015**

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ECPGR IN 2015 – HIGHLIGHTS

New version of the ECPGR Objectives for Phase IX

Outputs related to crop wild relatives in Outcome 3 were further developed and endorsed by the Steering Committee, and a new version was published:

[Objectives of ECPGR for Phase IX \(2014-2018\)](#)

(v2, April 2015 – outcome 3 on-farm component to be finalized)



EURISCO

- [National Focal Points Regional Training Workshop for Southeast Europe](#), 19–21 May 2015, Tirana, Albania.

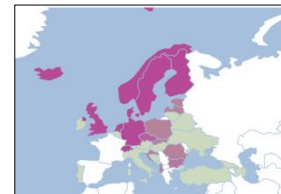
This workshop, funded under the First Call of the ECPGR Activity Grant Scheme, focussed on South-Eastern Europe, especially on the SEEDNet member countries. It brought together 20 participants, including 16 National Focal Points and/or National Coordinators.



- Extension of EURISCO for characterization and evaluation (C&E) data
The data exchange format for C&E data was finalized. The EURISCO database schema was extended to allow inclusion of C&E data. A prototype extension of the EURISCO web interface for searching and filtering of C&E data was developed and is being tested.

AEGIS – Growth of the European Collection

The European Collection has more than doubled compared to the status by end 2014, both in number of contributing countries (from 4 to 9 = five new countries) and in number of accessions (from 12 500 to 28 067 = increase by 15 567 accessions) (see the [European Collection webpage](#)).



Concept for *in situ* conservation of crop wild relatives in Europe

A new version of the “*in situ* concept” was submitted by the “Wild relatives concept” Task Force and endorsed by the Steering Committee in March 2015.

[ECPGR Concept for *in situ* conservation of crop wild relatives in Europe](#)



Concept for on-farm conservation and management of PGRFA diversity in Europe

Following the decisions of the [On-farm Concept meeting](#) (10-11 March 2015), a revised draft was submitted to the Executive Committee at the beginning of October 2015 by the appointed Task Force. This was welcomed as a background paper, but was not considered suitable for approval as such, owing to its length and structure. The Secretariat was asked to develop a more concise document, based on that paper.



Activity Grant Scheme – First Call

Eight proposals had been approved by the ExCo in December 2014 (see [Outcomes of the First Call](#)).

Five Activities were completed by the end of 2015. GeDiPa (Genetic diversity of *Patellifolia* species), HordEva (Identification and updating of C&E data in EBDB of AEGIS *Hordeum*) and COCHEVA BRAS (Collection, Characterization and Evaluation of wild and cultivated Brassicas) continue in 2016.

Details on the implementation and reports can be found on the respective Activity webpages.

Acronym	Working Group(s)	Activity Coordinator
1 HordEva	Barley / Doc&Info	Jan Svensson
2 GeDiPa	Beta / Wild species conservation	Lothar Frese
3 COCHEVA BRAS	Brassica	Ferdinando Branca
4 EURISCO Training 2015	Doc&Info	Stephan Weise
5 Forages 2020	Forages/ Wild species conservation/ Doc&Info	Azra Palma
6 ECoHaPy	Maize/Pyris	Mari Lathur
7 PRUNDOC	Prunus	Sten Harald Hjertes
8 TRAD	Wheat	François Balthouier

Activity Grant Scheme – Second Call

The call was launched 15 April and closed 3 August 2015.

A total of 12 proposals were received, of which 11 were considered eligible. Based on the assessment, and carefully applying the selection criteria, the ExCo selected three proposals for immediate funding (see [Outcomes of the Second Call](#)).

Three other proposals (Barley, Forages and *Prunus*) needed to be revised and Chairs were invited to consider resubmission for the next Call

Acronym	Working Group(s)	Activity Coordinator
1 EURISCO Training 2016	Documentation and Information	Stephan Weise, EURISCO Coordinator
2 InWGrape	Vitis	Goran Zilinski, Croatia
3 CWR Conservation Strategies	Wild species conservation in genetic reserves	Juozas Labokas, Lithuania

Seventh meeting of the Executive Committee

The [meeting](#) took place 28-30 October 2015 at Bioversity International.

The ExCo made decisions regarding the Activity Grant Scheme (selection of successful proposals under Second Call and planning of Third Call), the procedure to follow regarding the *On-farm concept*, the preparation of the 14th (Mid-term) Steering Committee meeting, the composition of the EURISCO Advisory Group and the composition of the ExCo (replacement of Zofia Bulińska-Radomska who completed her term at the end of the year).



Upcoming 14th (Mid-term) Steering Committee Meeting

The [meeting](#) is being organized in collaboration with the Genetic Resources Institute of the University of Banjaluka, and will take place at Višegrad, Bosnia and Herzegovina, from 31 May to 2 June 2016.

The ExCo will hold a one-day meeting on 30 May 2016.



1. ECPGR STRUCTURE AND MODE OF OPERATION IN PHASE IX

1.1. MEMBERSHIP AND CONTRIBUTIONS

By the end of December 2015, 33 countries had signed the Letter of Agreement (LoA) for Phase IX membership. The list of member countries with respective dates of signature is available online ([Membership webpage](#)).

Contributions for 2015 were received from all signatory member countries with the exception of Azerbaijan, Greece, Italy and Spain.

Two countries had not yet signed the LoA, but had already sent their contribution for 2015 (Belgium and Macedonia FYR).

Three countries had neither signed the LoA nor paid their contribution for 2015 (Bosnia and Herzegovina, Israel and Poland).

1.2. NEW VERSION OF THE ECPGR OBJECTIVES FOR PHASE IX ENDORSED BY THE STEERING COMMITTEE

Following the endorsement by the Steering Committee (SC) of the *Concept for in situ conservation of crop wild relatives in Europe*, the outputs related to crop wild relatives were further developed and endorsed by the SC and a new version of the ECPGR objectives was published:

[Objectives of ECPGR for Phase IX \(2014-2018\) \(v2, April 2015\)](#)

Final plans for the on-farm activities depend on the future decisions of the SC on the *Concept for on-farm management and conservation of PGRFA* (see below, 2.6.2, p. 13).

1.3. ACTIVITIES OF THE EXECUTIVE COMMITTEE (ExCo)

At the end of 2015, the ExCo was composed of Eva Thörn (Chair), Zofia Bulińska-Radomska, Flavio Roberto De Salvador, Gordana Đjurić, Jens Weibull, and Lorenzo Maggioni (ex officio).

Zofia Bulińska left the ExCo at the end of 2015 after having completed her term. Marc Lateur, National Coordinator from Belgium, was selected to replace her as representative of the West European sub-region in a broad sense, as of 1 January 2016.

The **Seventh ExCo meeting** took place 28-30 October 2015 at Bioversity International, Maccaresse, Italy.

During 2015, the main activities of the ExCo were related to the following items:

- **Discussion about opportunity and timing for developing an ECPGR long-term strategy**
A small group of National Coordinators had favourably commented a proposal sent by the Secretariat to develop a strategy. However, some differences remained about the precise scope, ultimate purpose and the mechanism for developing such a strategy. The ExCo noted ongoing initiatives related to the development of a European strategy, that is the "Preparatory action on EU plant and animal genetic resources in agriculture" and the preparation process for the submission of a project proposal involving ECPGR in the SFS7B Horizon 2020 Call. Consequently, the ExCo postponed the decision on the proposed strategy and planned to

include a specific agenda item in the next Mid-term SC meeting on the ECPGR Strategy development process.

- **Participation in the meeting to develop an ECPGR 'On-farm concept'**
See below, 2.6.2, p. 13.
- **Selection and appointment of Chairs of *Allium*, *Beta*, Leafy Vegetables and Potato Working Groups (WGs)**
See below, 1.5, p. 5.
- **Evaluation, selection and awarding of proposals submitted under the Second ECPGR Grant Scheme**
Proposals for the Second Call were selected and awarded (see below, 2.3, p. 9). The Third Call for proposals under the ECPGR Grant Scheme was proposed to be launched in January 2016, with deadline 15 April 2016.
- **Planning for Mid-term SC meeting**
The Mid-term Steering Committee meeting was planned to be held in Bosnia and Herzegovina. The agenda would include the announcement of selected Activity proposals under the Third Call of the Grant Scheme, an evaluation of the first part of Phase IX, priority and budgetary perspectives for Phase X, procedures for hosting arrangements of the Secretariat and an information item regarding the implementation of the Nagoya protocol vis-à-vis the Multilateral System. It was suggested to invite representatives from the European Commission, the International Treaty and Botanic Garden Conservation International.
- **Memberships in ECPGR**
ExCo Chair directly followed up with a few NCs to secure signatures.
- **Discussion about conditions for renewed membership in ECPGR of countries with outstanding contributions**
The possibility was discussed to write off part of the outstanding contributions to countries expressing a strong will to renew their membership to ECPGR under a more firm commitment than in the past. Preliminary interactions went on with Georgia and Russian Federation, but no concrete intention emerged from these countries to take a possible offer from ECPGR into consideration.
- **Preliminary analysis of draft *in situ* and on-farm concepts for endorsement by the SC**
See below, 2.6, p. 13.
- **Advice to Secretariat on participation in Horizon 2020 proposal preparation**
ExCo supported and advised the Secretariat regarding participation in Horizon 2020 proposal preparation.
- **Discussion on relationship between EURISCO and the EU Regulation on the Nagoya Protocol**
The opportunity was discussed to use EURISCO as an inventory of the "registered collections" that will be defined within the EU. Further clarification with the European Commission at this regard was considered useful.
- **Discussion and approval of AEGIS documents on 'AEGIS benefits' and 'Record-keeping, reporting and monitoring' for endorsement by the SC**
See below, 2.4, p. 10.

- **Discussion about appointment of EURISCO Advisory Committee**
A list of members proposed by the Chair of the Documentation and Information WG was discussed. A few changes in the list were requested, including a better representation of data providers and data users.
- **Activity meetings**
ExCo Chair participated in the Forages and Wheat WGs Activity meetings.

1.4. ONLINE SURVEYS TO COLLECT FEEDBACK FROM ECPGR MEMBERS

According to the decisions of the ExCo at its seventh meeting in October 2015, the Secretariat launched several online surveys in December 2015 to collect information from:

- the National Coordinators (NCs) and WG Chairs, on progress related to the ECPGR objectives under their responsibility
- all WG members, on the mode of operation of the WGs, including the appropriateness of the Grant Scheme and an evaluation of the respective WG Chairs.

Results will be provided to the SC as background documents for the 14th (Mid-term) SC meeting.

1.5. RENEWAL OF MEMBERSHIP IN ECPGR WORKING GROUPS

Working Group members

National Coordinators provided updates and new nominations throughout the year. The [new lists of WG members](#), including their respective categories of expertise, are available online and are constantly being updated.

Working Group Chairs

By the end of 2014, four Chairs were still to be nominated. The process was completed as follows:

- February 2015: nomination of Helena Stavělíková (*Allium* WG), Jelka Šuštar Vozlič (Leafy Vegetables WG) and Anca Baciú (Potato WG)
- May 2015: nomination of Parthenopi Ralli (*Beta* WG).

The full list of [New Chairs for ECPGR Working Groups during Phase IX](#) is available online.

2. ACTIVITIES CARRIED OUT IN 2015

2.2. ECPGR ACTIVITY GRANT SCHEME – FIRST CALL

Eight proposals had been approved by the ExCo in December 2014 (see Table 1 below, and [Outcomes of the First Call](#)).

Table 1. Proposals approved under the First Call and implemented in 2015

Acronym	Title	Working Groups	Coordinator
1. HordEva	Identification and updating of C&E data in EDBD of AEGIS <i>Hordeum</i>	Barley; Doc&Info	Jan Svensson, Sweden
2. GeDiPa	Genetic diversity of <i>Patellifolia</i> species	<i>Beta</i> ; Wild species	Lothar Frese, Germany
3. COCHEVA BRAS	Collection, characterization and evaluation of wild and cultivated brassicas	<i>Brassica</i>	Ferdinando Branca, Italy
4. EURISCO Training 2015	EURISCO National Focal Points (NFPs) regional training workshop for Southeast Europe 2015	Doc&Info	Stephan Weise, Germany
5. Forages 2020	ECPGR Working Group for Forages towards 2020	Forages; Wild species; Doc&Info	Anna Palmé, Sweden
6. ECoHisPy	Building and promoting a European <i>Pyrus</i> collection - a Case study	<i>Malus/Pyrus</i>	Marc Lateur, Belgium
7. PRUNDOC	Identification of a representative set of <i>Prunus domestica</i> accessions of European origin, well documented and characterized, to be included into the AEGIS system	<i>Prunus</i>	Stein Harald Hjeltnes, Norway
8. TRAID	Identification and update C&E data of AEGIS <i>Triticum</i> sp. accessions	Wheat	Francois Balfourier, France

By the end of 2015, five Activities were completed (EURISCO Training 2015, Forages 2020, ECoHisPy, PRUNDOC and TRAIID). GeDiPa, HordEva and COCHEVA BRAS are expected to be completed in 2016.

Summaries of results at end 2015 are presented below. More details on the implementation and reports can be found on the respective Activity webpages.

Identification and updating of C&E data in EBDB of AEGIS *Hordeum* (HordEva) ([HordEva webpage](#))

Working Groups: Barley and Doc&Info.

Duration: originally 12 months (January-December 2015), extended to end January 2016.

The aims of HordEva were to increase the number of AEGIS barley accessions in EURISCO, and to improve barley data quality (update of C&E data for relevant descriptors agreed among partners).

Partners developed lists of candidate AEGIS accessions and presented their results at the final project meeting (November 2015), as well as the available C&E data. The number of selected accessions for AEGIS was as follows: Bulgaria (113), France (570), Germany (12820), Latvia (28), Lithuania (36), Nordic countries (577), Poland (149), Romania (65), Slovakia (43) and Switzerland (773). These lists will be submitted to the respective National Coordinators for approval and flagging in EURISCO.

Genetic diversity of *Patellifolia* species (GeDiPa) ([GeDiPa webpage](#))

Working Groups: *Beta* and Wild Species Conservation in Genetic Reserves.

Duration: 24 months (January 2015-December 2016).

Patellifolia species are distantly related wild relatives of cultivated beets, with promising resistance traits. The action aims at a better understanding of the spatial distribution of genetic diversity within the genus, the establishment of taxonomic standard accessions as well as the identification of Most Appropriate Accessions (MAAs) for AEGIS and to (re)visit sites recommended for the establishment of genetic reserves by the AEGRO project team.

Geographic gaps in the European Collection of *Patellifolia* accessions were identified and collecting trips took place to close gaps. New accessions were deposited in Spanish and Portuguese genebanks. A set of polymorphic SSR markers, suited to characterize genetic diversity of *Patellifolia* species, was developed. The set will facilitate the rationale selection of MAAs for AEGIS.

Collection, Characterization and Evaluation of wild and cultivated Brassicas (COCHEVA BRAS) ([COCHEVA BRAS webpage](#))

Working Group: *Brassica*.

Duration: originally 12 months (January 2015), extended to 15 May 2016.

The aim of COCHEVA BRAS was the characterization for morphological, biochemical and genetic traits of 40 accessions from the *Brassica* collections of the BPGV INIAV of Braga (Portugal) and Di3A of University of Catania (Italy). These accessions include 25 landraces and 5 commercial cultivars of *B. oleracea* vegetable crops and 10 wild Brassica (n=9), selected for potential inclusion in the AEGIS European Collection. Regarding the evaluation for the antioxidant content of the accessions grown in Catania and in Braga, the freeze-dried samples sent by Di3A and BPGV INIAV will be analysed by CRRRA IAA Milan for PHP and AC, by CSIS Cordoba and by UNIVR Vila Real for GLS profile.

Two characterization fields were established both in Braga and in Catania. The activities are at various stages depending on the accessions (morphological characterization, collection of samples for biochemical analysis, DNA extraction, microsatellite studies) and should be completed by 15 May 2016.

EURISCO Training 2015 ([EURISCO Training 2015 webpage](#))

Working Group: Doc&Info.

Duration: 0.5 month (workshop held 19-21 May 2015).

This “National Focal Points Regional Training Workshop for Southeast Europe” focussed on SEEDNet member countries. The Workshop, organized in collaboration with the Agricultural University of Tirana, Department of Plant Sciences and Technology, brought together 20 participants, including 16 National Focal Points/National Coordinators.

The status of National Inventories (NIs) of the participating countries and the foreseen development of EURISCO were presented. Hands-on sessions allowed testing the update procedure for several NIs.

Other points of discussion were the EURISCO Intranet, possible extension of passport descriptors, upload and utilization of C&E data.

Shortly after the meeting, updates were made for datasets from Albania, Croatia, Estonia and Spain.

ECPGR WG for Forages towards 2020s (Forages 2020) ([Forages 2020 webpage](#))

Working Group: Forages, Wild species conservation in genetic reserves, Doc&Info.

Duration: 12 months (January–December 2015).

The three main tasks planned for Forages 2020 were implemented as follows:

1. Work towards the establishment of the European Forage Collection (EFC) in accordance with the AEGIS goals: substantial progress was made in the development of the EFC. By 1 November 2015, 7024 forage accessions were flagged in EURISCO within the most important forage genera

by the following countries: Czech Republic (236), Germany (2203), the Netherlands (841), Nordic Countries (1303) and UK (2431). In addition, at least five other countries had started their selection process.

2. Inventory of evaluation and characterization (C&E) data on European forage accessions: the results of the survey showed that there is a broad range of C&E data sets available. These data would be very useful for the selection of material to be used in breeding and pre-breeding, and should be made publicly available. The Forages WG will provide test data to facilitate the development of the C&E module in EURISCO.
3. Development of a new workplan for the ECPGR Forages Working Group: at end 2015 the workplan developed by the Forages 2020 partners was being further discussed and elaborated with contributions from all WG members.

Building and promoting a European *Pyrus* collection – A case study (ECoHisPy) ([ECoHisPy webpage](#))

Working Group: *Malus/Pyrus*.

Duration: 12 months (January–December 2015).

The aim of ECoHisPy was to initiate the AEGIS European Collection of *Pyrus*, focusing on a sample of around 100 true-to-type historical and landraces European pear cultivars.

Partners agreed on the methodology for the selection of the most appropriate set of cultivars (identification of synonyms, SSR analysis, use of characterization and evaluation descriptors, and standard descriptions).

The SSR profiles of 141 leaf accessions from the ECoHisPy partners were analysed by Agroscope (Switzerland) using 16 SSR markers and 8 reference cultivars. Results of the analysis were compiled and merged with those of other studies from Germany, Switzerland and UK; the complete data set covers a total of 220 pear accessions that have at least 9 SSR markers in common.

The agreed C&E descriptors, including 10 priority characterization traits and 19 evaluation traits, were used during the 2015 harvest period by all partners for their most original cultivars.

A first analysis of SSR data was carried out to identify putative synonyms, homonyms and original material; this information played a key role for the final definition of the most original and historical European pear cultivars defined as “Most Appropriate Accessions (MAAs)” that will be proposed to be included in the AEGIS European Collection and will finally be described by each partner on common bases.

Identification of a representative set of *Prunus domestica* accessions of European origin, well documented and characterized, to be included into the AEGIS system (PRUNDOC) ([PRUNDOC webpage](#))

Working Group: *Prunus*.

Duration: 12 months (January–December 2015).

The proposed aim of PRUNDOC was to develop and test a selection methodology for Most Appropriate Accessions (MAAs) of plum species to be included in the AEGIS European Collection, using both new SSR primers and the European *Prunus* Database (EPDB).

More than 100 plum (*P. domestica* and *P. insititia*) traditional varieties, native to Europe, endowed with valuable rusticity and/or qualitative traits, were well described for their First Priority Descriptors (FPD) traits and documented with fruit pictures.

SSR analyses were carried out by the laboratory at the Swedish University of Agricultural Sciences (SLU) Balsgård. About 40 accessions were genotyped with a common set of SSR markers.

The harmonized characterization and evaluation description and knowledge of their allelic profile will allow identification of duplicates, if any. PRUNDOC being completed, they will be proposed for inclusion in AEGIS.

***Triticum* in AEGIS: Identification and Documentation (TRAID) ([TRAID webpage](#))**

Working Group: Wheat.

Duration: 12 months (January–December 2015).

The aims of TRAID were to increase the participation of Wheat WG members in the AEGIS initiative to create a European Collection on *Triticum* and to increase the quantity and quality of data in EURISCO.

In a first step, the partners checked and updated the list of accessions in the European Wheat Database (EWDB) distributed at the last meeting of the Wheat WG (May 2012). Those of the TRAID partners who had not yet defined AEGIS candidate accessions identified eligible AEGIS candidate accessions for flagging in the EWDB. Partners who had already designated candidate accessions checked and updated related passport data and C&E data for these accessions.

A total of 5659 accessions from 12 countries were identified as eligible for the AEGIS European Collection and flagged in the EWDB. The respective passport and C&E data were updated in the EWDB.

Further to approval of the lists by National Coordinators, the accessions will be included in the European Collection by the EURISCO National Inventory Focal Points.

2.3. ECPGR ACTIVITY GRANT SCHEME – SECOND CALL

The Second Call for proposals under the ECPGR Activity Grant Scheme was launched on 15 April 2015, with an original deadline 15 July, later extended to 3 August 2015. The Call was sent by email to the NCs, WG Chairs and WG members. A total of 12 proposals were received, of which 11 were considered eligible. Based on the established evaluation criteria, the ExCo selected for immediate funding three proposals, involving three WGs: Documentation and Information, *Vitis* and Wild Species Conservation in Genetic Reserves (see Table 2 below). Three other proposals (Barley, Forages and *Prunus*) needed to be revised and could be resubmitted; requests were sent to the Activity Coordinators. Updates are available from the webpage ([Outcomes of the Second Call](#)).

Table 2. Proposals approved under the Second Call by the ExCo (October 2015)

Acronym	Title	Working Group	Activity Coordinator	Budget
EURISCO Training 2016	EURISCO National Focal Point regional training workshop 2016	Documentation and Information	Stephan Weise, EURISCO Coordinator	€ 14 500
InWiGrape	Increasing the efficiency of conservation of wild grapevine genetic resources in Europe	<i>Vitis</i>	Goran Zdunic, Croatia	€ 15 000
CWR Conservation Strategies	Promoting implementation of national and regional crop wild relative (CWR) conservation strategies through sharing of knowledge and experience to create an integrated European strategy for CWR conservation	Wild species conservation in genetic reserves	Juozas Labokas, Lithuania	€ 15 000

2.4. AEGIS

2.4.1. AEGIS membership

During 2015 no new country signed the AEGIS Memorandum of Understanding (MoU). The current 34 members are listed below. The number in brackets following the member country names indicates the respective number of Associate Member institutions. One additional AEGIS Associate Membership Agreement was signed in 2015 (HBLFA Raumberg-Gumpenstein, Austria), bringing the total number to 58:

Albania (2), Austria (2), Azerbaijan (2), Belarus (9), Belgium (1), Bosnia and Herzegovina (0), Bulgaria (1), Croatia (2), Cyprus (1), Czech Republic (8), Denmark (1), Estonia (2), Finland (1), Georgia (1), Germany (3), Hungary (1), Iceland (1), Ireland (0), Italy (0), Latvia (3), Lithuania (0), Montenegro (0), the Netherlands (2), Norway (1), Poland (1), Portugal (0), Romania (1), Slovakia (1), Slovenia (5), Sweden (1), Switzerland (1), Turkey (1), Ukraine (0) and the United Kingdom (3).

The membership status is kept updated online (see the respective webpages [AEGIS membership](#) and [Associate Member Institutions](#)).

2.4.2. Status of the European Collection

By end December 2015 a total of 28 067 accessions from nine countries were included in the European Collection.

The European Collection has more than doubled compared to the status by end 2014, both in number of contributing countries (from 4 to 9 = 5 new countries) and in number of accessions (from 12 500 to 28 067 = increase by 15 567 accessions).

The changes in the composition of the European Collection over 2015 are shown in Table 3 below.

Table 3. The European Collection: breakdown by contributing country

Country	No. of accessions flagged as AEGIS	
	by end 2014	by end 2015
Albania	0	8
Bulgaria	0	261
Croatia	90	90
Czech Republic	1222	1222
Germany	5324	7904
The Netherlands	5864	5853
Nordic Countries	0	3708
Switzerland	0	4838
United Kingdom	0	4183
Total	12500	28067

Since August 2015, the [European Collection webpage](#) provides the possibility to "Watch the latest registrations for the European Collection", thanks to a new tool in EURISCO which displays every change occurring in AEGIS accessions (flagging or de-flagging and why) (operations performed before August have not been tracked).

2.4.3. AEGIS Benefits – Information paper

Following the ExCo's request, a paper was prepared by the Secretariat to highlight the most important benefits of AEGIS at various levels: Member Countries, Associate Member institutes, and users of

germplasm. This information paper, titled *Benefits of establishing and operating a European Collection of unique and important germplasm* was finalized in October 2015 and published online (see [here](#)).

2.4.4. AQUAS (AEGIS Quality System)

- **Crop-specific standards**

The process dedicated to reaching Working Groups' agreement on *FAO Genebank Standards for PGRFA* and/or development of crop-specific standards, which had been started in 2014, continued in 2015, involving extensive interactions with the Chairs and WG members.

By the end of 2015, two sets of crop-specific genebank standards had been finalized: (*Allium*/field genebanks; Cucurbits/orthodox seeds). Several other WGs are actively engaged in this process.

The agreed standards are available from their respective WG's webpages and from AEGIS webpages (all together [here](#)).

The finalized standards will be sent to the Steering Committee for endorsement.

The *Vitis* WG formally endorsed the *Three protocols for germplasm sustainable conservation* (final results of the COST Action FA1003, October 2014, available online on the [ECPGR website](#)). These were further published in the *Vitis Journal of Grapevine Research* and will be the basis for the AEGIS standards.

- **Establishment of a monitoring and reporting plan**

The draft paper on *Record keeping, reporting and monitoring of the European Collection*, shared with the Steering Committee in 2014, was revised to incorporate the comments received from a number of National Coordinators and the ExCo, and circulated again to the Steering Committee in December 2015. (The paper was eventually endorsed by the SC 15 January 2016. The final version is available online ([here](#)).

2.5. EURISCO

The Activity report for 2014 and the Workplan for 2015 were made available online on the EURISCO website (Documents section).

2.5.1. EURISCO coverage

In 2015, 28 updates of National Inventory datasets were performed, either completely or in part. Within the last 12 months, the number of accessions increased by 722 373, reaching a total of 1 837 368 accessions from 43 National Inventories and 375 individual holding institutions by 23 December 2015. This year's addition includes a large dataset of about 670 000 *Arabidopsis* accessions from the Nottingham Arabidopsis Stock Centre, UK. Accessions in EURISCO represent 6234 unique genera and 41 642 species, although these figures are somehow overestimated, owing to spelling errors and different taxonomies used by the National Inventories. Statistics on the composition of EURISCO (number of accessions per National Inventory, number of accessions per genus, etc.) are available on the EURISCO website.

2.5.2. EURISCO development

Extension of EURISCO for characterization and evaluation (C&E) data

The data exchange format for C&E data was finalized. The EURISCO database schema was extended to allow inclusion of C&E data. Tools for the upload of C&E data were implemented and tested. Two

large test datasets from CGN and IPK were imported (for testing purposes and to demonstrate the benefits of C&E data from EURISCO).

Based on the extension of the EURISCO database schema, a prototype extension of the EURISCO web interface for searching and filtering of C&E data was developed and is being tested. It is intended to make it publicly available within the first half of 2016.

Extension of the upload mechanism for National Inventories

The development of the new upload mechanism for passport data, already started in 2014, was completed in 2015.

The data quality/integrity checks, which are performed during passport data imports, were improved (to be continued in 2016).

In close connection with the extension of EURISCO for C&E data, a tool for the import of C&E data was also developed.

The web interface of the EURISCO intranet was extended for C&E data. The new version will be made publicly available soon.

Other developments included the **extension of functionality of the public EURISCO application** (statistics section, search functionalities, etc.) and of the **EURISCO intranet application** (AEGIS status tracking tool).

For more details, see the Activity report for 2015 on the EURISCO website.

2.5.3. EURISCO Training Workshops (Activities funded by the ECPGR Grant Scheme)

Starting in 2015, the series of regional EURISCO training workshops was revived. In order to run the training, all necessary training materials, as well as a test environment for a hands-on training were developed. The first workshop ([EURISCO Training 2015 \(EURISCO NFP regional training workshop for Southeast Europe 2015\)](#)) was funded by the ECPGR Grant Scheme (see 2.2. above).

The report and the presentations given during the workshop are available online ([here](#)). A second workshop was also selected for funding under the Second Call of the Grant Scheme and will be held in France in 2016, dedicated to the NFPs from central Europe.

2.5.4. Information on EURISCO at national and international meetings

- **Presentation** given at the Workshop on “Genetic resources: conservation and trait improvement” (workshop of the GPZ [German Society of Plant Breeding] working group Plant Genetic Resources, 10–11 December 2015, Gatersleben, Germany)
- **Poster** presented at the TDWG (Biodiversity Information Standards) 2015 Annual Conference “Applications, Standards and Capacity Building for Sustaining Global Biodiversity”, 28 September–1 October 2015, Nairobi, Kenya
- **Poster** on “Plant Genetic Resources from the Balkan Peninsula in the World’s Genebanks” using EURISCO data along with FAO WIEWS and Genesys, presented at the 2nd International Symposium for Agriculture and Food, 7–9 October 2015, Ohrid, Macedonia (FYR)
- The **C&E data exchange format** developed for EURISCO was presented at the workshop “Metadata standards for linking characterisation & evaluation data to genebank accessions registered in Genesys”, 23 November 2015, Amsterdam-Schiphol, The Netherlands.

2.5.5. EURISCO Newsletter

The first issue of the new EURISCO Newsletter, now produced by IPK-Gatersleben, was released in December 2015. It is available online both from the ECPGR website ([here](#)) and from the [EURISCO website](#) (under Documents). The Newsletter provides feedback to National Focal Points (NFPs) and serves as a dissemination vehicle for NFPs and other partners to put forward their contributions

regarding plant genetic resources issues/themes. The Newsletter is planned to be issued twice a year (June/December).

2.6. *IN SITU* AND ON-FARM CONSERVATION AND MANAGEMENT

2.6.1. Concept for *in situ* conservation of crop wild relatives in Europe

Based on the comments made by the Steering Committee, a new version of the concept on “*In situ* conservation of crop wild relatives” was submitted by the respective Task Force and then endorsed by the SC in March 2015. The final version was published online:

[ECPGR Concept for *in situ* conservation of crop wild relatives in Europe](#)

2.6.2. Concept for on-farm management and conservation of landraces

Following the remarks made by the SC in 2014 to the first draft of the concept on ‘On-farm management and conservation of landraces’, a meeting to streamline the process for the drafting of a revised version was organized in Maccarese, Italy (10-11 March 2015). Representatives of the respective Task Force, of the Steering Committee and the Secretariat attended. An outline for the development of a revised draft by the Task Force was agreed and a new document submitted to the Executive Committee at the beginning of October 2015. This was welcomed as a background paper, but was not considered suitable for approval as such, owing to its length and structure. The Secretariat was asked to develop a more concise document, based on that paper.

3. LINKS WITH OTHER NETWORKS AND INITIATIVES

EUROPEAN COMMISSION

A number of relevant calls for proposals and initiatives with relevance for plant genetic resources were launched by the European Commission, and ECPGR was involved in various ways:

- Implementation of a ‘**Preparatory action on EU plant and animal genetic resources in agriculture**’ was ongoing, carried out by a Consortium led by Arcadia International and including CGN, the Netherlands and BLE, Germany. The project has carried out an extensive literature review and 330 interviews, mapped the genetic resources institutions in Europe and visited 21 case study projects on conservation and use. Five workshops were organized on 1) Complementarity between *in situ* and *ex situ*; 2) Animal genetic resources; 3) Microbial genetic resources; 4) Impact of climate change on conservation and use of CWR. Workshops to be held in 2016 relate to ‘Implementation of Nagoya protocol’ (February 2016) and ‘Implementation of GPA’ (April 2016). A final conference will be held on 9 June in Brussels, with presentation by the project consortium of draft recommendations to the EC resulting from the knowledge acquired during the Preparatory action. More information is available from the action website (<http://www.geneticresources.eu/>).
- As part of the **EU Research and Innovation Programme Horizon 2020**, the ECPGR Secretariat was either directly involved, or supportive of consortia for the preparation of proposals to the call SFS-7-2014/2015 Genetic resources and agricultural diversity for food security, productivity and resilience, Part B, ‘Management and sustainable use of genetic resources’, with deadline in February 2015. The Secretariat was involved in the preparation of two

projects that were invited to submit full proposals for the second stage of the scheme. These proposals, REMBRANDT (Research to Enhance Management of *Brassica* genetic Resource and Human Nutrition) and PGRGOLD (Mining Plant Genetic Resources for the new gold - ensuring food security in a changing environment) were eventually ranked 5th and 6th with a high score, but not sufficient to receive funding.

- **Collaboration with COST Actions**

- The ECPGR Secretariat had given external support to the **COST Action proposal *Eurasian Wild and Bred Grapevine Diversity: Facing Changing Climates and Markets (EUGRAPE)***. The proposal was not accepted but the coordinator is planning to resubmit it under the next (third) Collection Date (25 April 2016). The evaluators identified the link with the ECPGR *Vitis* WG as the main strength of the project.

- The *Prunus* WG has been collaborating with the [COST Action FA1104 'Sustainable production of high-quality cherries for the European market'](#). This Action aims at creating a dynamic network of scientists and other professionals conducting research to improve sweet or sour cherry production in Europe, the main cherry producer.

Several WG members participated in the workshop on "Long Term Preservation of Woody Species by Cryo-Techniques", 26-27 March 2015, Area di Ricerca CNR di Firenze, Italy.

This workshop was organized within WG1 'Genetic resources and breeding, Genetics and Genomics' established in the COST Action FA1104. The workshop programme, list of participants, book of abstracts and scientific report are available from the [Prunus WG webpage](#).

- On behalf of ECPGR, the Secretariat has signed an expression of interest to collaborate with the **ERA-CAPS project BEAN_ADAPT**. This project, involving European and American partners, seeks to understand the genetic architecture of adaptation of the common bean (*Phaseolus vulgaris*) and its cross-compatible sister species, the runner bean (*Phaseolus coccineus*), in their centres of origin in the Americas and following their dispersal to Europe, as a model for future major environmental and socio-economic changes, such as increases in temperature, variability in rainfall, and new consumer preferences. Among the main expected outcomes of BEAN_ADAPT there is the development in *P. vulgaris* of haplotypes of 10 000 accessions from three major genebanks, along with associated information and seed stocks, which will represent a unique tool for plant scientists. The Chair of the WG on Grain Legumes, Creola Brezeanu, attended the project kick-off meeting in Bonn, Germany, 10-11 August 2015.
- Some members of the Forages Working Group are involved in the project [GrassLandscape - Bridging landscape genomics and quantitative genetics for a regional adaptation of European grasslands to climate change \(FACCE-JPI ERA-NET Plus action 'Climate Smart Agriculture: Adaptation of agricultural systems in Europe'\)](#). The project is coordinated by J.P. Sampoux, French member of the Forages WG. The consortium includes INRA and EPHE in France, IPK in Germany, IBERS in the UK and ILVO in Belgium. The main objective of the project is to detect genomic markers of climatic adaptation in the natural diversity of perennial ryegrass and to use this information to adapt this species to the anthropogenic climate change foreseen to happen in next decades. In 2015, 500 accessions from the natural diversity of perennial ryegrass were sampled from European genebanks and 50 populations were newly collected across Europe. All these materials were prepared for genotyping based on high-throughput sequencing technology and for assessment in field trials and on high-throughput phenotyping platform. Results of the project will provide new C&E data to feed the corresponding perennial ryegrass accessions in the EURISCO database and accessions used will be flagged in the European Forage Collection (EFC). Ultimately, genetic pools adapted to future regional climates of Europe are expected to be released and referenced in European collections.

4. PUBLICATIONS AND PUBLIC AWARENESS

4.1. PUBLICATIONS PRODUCED IN 2015

4.1.1. Administrative and operational documents

- ECPGR [Annual Progress Report 2014](#) and [Financial Report 2014](#)
- [Objectives of ECPGR for Phase IX \(2014-2018\) - v2, April 2015](#)

4.1.2. ExCo Meeting reports

- [Minutes of the sixth ECPGR Executive Committee meeting](#), 8-10 December 2014, Maccarese, Italy
- [Minutes of the seventh ECPGR Executive Committee meeting](#), 28-30 October 2015, Maccarese, Italy

4.1.3. Grant Scheme Activity Reports

- [Report of the EURISCO Training Workshop 2015. National Focal Points Regional Training Workshop for Southeast Europe, 19–21 May 2015, Tirana, Albania](#)

4.1.4. AEGIS-related documents

- [Benefits of establishing and operating a European Collection of unique and important germplasm \(Information paper\)](#)

4.1.5. Other ECPGR documents

- [ECPGR Concept for *in situ* conservation of crop wild relatives in Europe](#)
- [ECPGR Information bulletin](#)

Four issues of the quarterly bulletin were published: February (issue no. 2), May (no. 3), August (no. 4) and November (no. 5).

The bulletin is distributed by email to all members of the Steering Committee and is also available [online](#).

- [Public awareness material](#)

A new brochure *ECPGR Phase IX (2014-2018)* providing essential information on ECPGR was produced and published on the [public awareness webpage](#).

4.1.6. External publications with contribution from Secretariat

- Maggioni L, López Noriega I, Lapeña I, Holubec V, Engels J. 2015. Collecting Plant Genetic Resources in Europe: A Survey of Legal Requirements and Practical Experiences. In: Coolsaet B. et al., eds. Implementing the Nagoya Protocol. Comparing Access and Benefit-sharing Regimes in Europe. Brill | Nijhoff. pp. 327-362. (with inputs from several National Coordinators and other ECPGR members).
- Maggioni L. 2015. Domestication of *Brassica oleracea* L.. Doctoral Thesis. Department of Plant Breeding, Swedish University of Agricultural Sciences, Alnarp, Sweden.

4.2. PUBLICATIONS IN PREPARATION IN 2015

4.2.1. AEGIS-related document

- **Record keeping, reporting and monitoring of the European Collection** (*final version endorsed by the Steering Committee 15 January 2016 and published online*)

4.2.2. Grant Scheme Activity Reports

- **Genetic diversity of *Patellifolia* species (GeDiPa). Interim report** (*finalized and published online January 2016*)
- **ECPGR WG for Forages towards 2020s (Forages 2020)** (*finalized and published online February 2016*)

4.3. PRESENTATIONS AT INTERNATIONAL MEETINGS

The Secretary represented ECPGR in the following meetings, offering presentations and/or contributing to project planning:

- **Horizon 2020 – Consortium meetings**
 - **PGRGOLD (Mining Plant Genetic Resources for the new gold – ensuring food security in a changing environment)**, 4 May 2015, Schiphol, The Netherlands
 - **REMBRANDT (Research to enhance management of *Brassica* genetic resources and human nutrition)**, 19-20 May 2015, Rome, Italy
- **II International Plant Science Conference and 110th Congress of the Italian Botany Society: “Not only food: sustainable development, agrobiodiversity conservation & human well being” (in connection with EXPO Milano 2015 “Feeding the planet, energy for life”), 14-18 September 2015, Pavia, Italy**

Lorenzo Maggioni as invited speaker presented “*Plant genetic resources conservation in Europe: the AEGIS Experience*”. The presentation is available online ([here](#)).

5. MEETINGS HELD IN 2015

5.1. GRANT SCHEME ACTIVITIES

- GeDiPa coordination meeting, 17 February 2015, Madrid, Spain
- PRUNDOC technical meeting, 20-21 April 2015, Leuven, Belgium
- HordEva first meeting, 21 April 2015, Berlin, Germany
- EURISCO Training Workshop 2015, 19-21 May 2015, Tirana, Albania
- TRAIID partners meeting, 16-17 September 2015, Tallinn, Estonia
- Forages 2020 project workshop, 9-11 November, Alnarp, Sweden
- HordEva project meeting, 18-20 November 2015, Alnarp, Sweden

5.2. OTHER MEETINGS

- [On-farm Concept meeting](#), 10-11 March 2015, Maccarese, Italy
- [Seventh meeting of the Executive Committee](#), 28-30 October 2015, Maccarese, Italy

6. COORDINATING SECRETARIAT

During 2015, the following staff employed by Bioversity International have worked for the Coordinating Secretariat: Jan Engels (part-time [25%] AEGIS Coordinator); Lidwina Koop (ECPGR Programme Assistant, assisting in all administrative and financial matters and website maintenance); Elinor Lipman (half-time Scientific Assistant, based in Montpellier, France, involved in the compilation and layout of ECPGR publications, website quality check and general support to the Secretariat activities); and Lorenzo Maggioni (ECPGR Secretary). Stephan Weise (IPK, Gatersleben, Germany) acted as EURISCO Coordinator.

The scientific and technical contributions, as well as management and administrative support provided by other staff from Bioversity International and IPK to the work of ECPGR are duly acknowledged.

★★★

Lorenzo Maggioni
ECPGR Secretary

(with inputs from Jan Engels, Lidwina Koop, Elinor Lipman and Stephan Weise)

Rome, 29 April 2016

Bioversity International, Via dei Tre Denari 472/a 00057 Maccarese (Fiumicino), Rome, Italy
Tel: (39) 06 6118 231; Fax: (39) 06 61979661; Email: l.maggioni@cgiar.org