



European Cooperative Programme for Plant Genetic Resources (ECPGR)

Phase VIII (2009-2013)
2009 Progress Report

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SUMMARY

The first year of Phase VIII was initially dedicated to plan in further detail all the meetings and activities foreseen by the Networks for the entire Phase. Membership in ECPGR was secured for 34 out of the 43 expected participating countries. Montenegro and Russian Federation joined ECPGR as new members.

The reservations raised by the Nordic Countries in 2008 to the full adoption by the Steering Committee of the Memorandum of Understanding (MoU) for AEGIS (A European Genebank Integrated System) were resolved in early 2009 and the finalized and approved text of the MoU was then sent to the ECPGR National Coordinators for signature by the respective country authorities. Upon the signature of the tenth country eligible for membership, AEGIS entered into force in July 2009 and counted 17 members at the end of the year. A new AEGIS Advisory Group was established in September 2009. Progress was made in the finalization of a discussion paper on a "Quality Management System for AEGIS" (AQUAS). The first call of the AEGIS Competitive Grant Scheme, which is intended to support activities that will directly contribute to the establishment and/or operation of AEGIS, was launched in June 2009 and, by the deadline of October, 14 eligible proposals were received and went through the process of evaluation.

A major effort, undertaken by the Secretariat in collaboration with several ECPGR Network members and other partners between July and December, was the preparation of the EUROGENEBANK project proposal, which was submitted for funding under the 7th Framework Programme (FP7) of the European Union, in response to a call for "Research Infrastructures – Support to existing research infrastructures – Integrating Activities".

Preparations for the ECPGR Independent External Review proceeded with the definition of the Terms of Reference for the Review and the appointment of three panel members. Funds to carry out the Review were also secured through voluntary contributions from Finland, the Nordic Countries, Switzerland and the United Kingdom.

The year 2009 was the first year of activity of a two-year project funded by the Global Crop Diversity Trust for the regeneration and safety-duplication of over 5000 threatened accessions identified in ten European countries. The project had been jointly prepared by the ECPGR Cereals Network and the ECPGR Oil and Protein Crops Network. The 12 partner institutions involved in the project have successfully regenerated 414 grain legume accessions (chickpea, common bean, cowpea, faba bean, grasspea and lentil) and 1522 cereal accessions (*Aegilops*, barley, maize, sorghum and wheat).

The Cereals Network organized two successful collecting missions of wild *Avena* species in Cyprus and organized a pre-breeding workshop in Sweden that highlighted the importance of pre-breeding and the opportunities for collaboration, resulting in a concept note on small grain cereals.

The Working Group (WG) on Medicinal and Aromatic Plants held its fourth meeting in Turkey where the workplan for the ECPGR-funded project on characterization of European oregano samples was set up.

The Vegetables Network held its third meeting in Italy, reviewed all its activities and planned how to start the implementation of AEGIS.

The Documentation and Information Network held an EPGRIS3 workshop in Germany to discuss a proposal for the inclusion of characterization and evaluation data into EURISCO. After circulation to the entire Network and the Steering Committee, a revised proposal was eventually approved and plans were made for its implementation.

EURISCO seminars and trainings were organized in Armenia, Bosnia and Herzegovina, Russian Federation and Ukraine, aiming at strengthening national capacity in data exchange and EURISCO sustainability. A training workshop was also held in the Czech Republic in collaboration with SEEDNet, involving 30 National Inventory Focal Points.

The *In situ* and On-farm Conservation Network was involved in the preparation of a project for "Novel characterization of crop wild relatives and landraces resources as a basis for improved crop breeding" (PGR Secure), to be submitted in January 2010 to the EU FP7 funding scheme for Collaborative Projects. The Network also produced two publications: "European landraces: on-farm conservation, management and use" (Biodiversity Technical Bulletin No. 15) and the report of a 2007 workshop on "Crop Genetic Resources in European home gardens".

The Terms of Reference of the Inter-regional Cooperation Network were re-defined and the Network organized a workshop in Uganda, jointly with the FAO-Treaty Secretariat, Biodiversity and the East African Network (EAPGREN), for capacity building towards the implementation of the International Treaty.

1. INTRODUCTION

This is the first Annual Progress Report of Phase VIII (2009-2013), covering the period from 1 January to 31 December 2009.

While this report aims to put on record all the relevant events which occurred during 2009, the Steering Committee (SC) has been kept informed on a more regular basis through the dedicated "Steering Committee listserver", which is managed by NordGen. In particular, through the listserver, the following information was delivered and actions requiring Steering Committee decisions have been completed:

- Provision of a list of meetings and activities planned in Phase VIII and a request to National Coordinators to decide for which meetings in 2009 they would use the country quota (January 2009);
- Draft Terms of Reference for the Inter-regional Cooperation Network Coordinating Group and request for nominations of members for this group (January 2009);
- Proposal for approval of a footnote suggested by Finland, related to Article 8(a)(v) of the AEGIS Memorandum of Understanding, regarding the use of the Standard Material Transfer Agreement in respect of transfers of non-Annex 1 crops (January 2009);
- Updates on changes in the Steering Committee and Networks (January 2009);
- Proposal for endorsement of the document developed by the Secretariat, in close consultation with the Task Force appointed by the Steering Committee, outlining the principles and the Terms of Reference to be used to implement the AEGIS Grant Scheme activities (February 2009);
- Announcement of endorsement of the Terms of Reference for the Inter-regional Cooperation Network Coordinating Group and proposal for its composition (February 2009);
- Circulation for comments and approval of the Terms of Reference for the Independent External Review of ECPGR (March 2009);
- Update on ECPGR meetings planned for 2009 (April 2009);
- Update on upcoming funding opportunities in the European Union's 7th Framework Programme (7FP) for research (April 2009);
- Update and request for comments on the decision by the Documentation and Information Network to set up a mechanism for inclusion of characterization and evaluation data into EURISCO (June 2009);
- Announcement of the Call for Proposals of the Competitive AEGIS Grant Scheme and the Application Form for the submission of proposals to the Scheme (June 2009);
- Circulation of ECPGR Annual Technical and Financial Reports for 2008, including a request for support for the proposed breakdown of Phase VII carry-over funds (July 2009);
- Announcement of 2010 Call for Research Proposals for the Vavilov-Frankel Fellowships (July 2009);
- Circulation for comments of the second draft of the Terms of Reference for the AEGIS Advisory Committee and of proposal for the composition of the Advisory Group (July 2008);
- Announcement of the AEGIS Memorandum of Understanding entering into force after signature by ten member countries (September 2009);
- Circulation for comments and/or approval of the Final draft of the document "A Quality System for AEGIS" (AQUAS) (September 2009);
- Circulation for comments and/or endorsement of a proposed list of candidates who could be appointed as panel members for the ECPGR Independent External Review (September 2009);
- Clarification on comments received from Finland, Germany and Sweden related to the ECPGR Financial Report 2008 (September 2009);
- Announcement of the Third Call for Proposals for the Evaluation Award Scheme of the Global Crop Diversity Trust on "Enhancing the Value of Crop Diversity (October 2009);
- Circulation of information and request for support of the FP7 project under preparation by the University of Birmingham, related to "Novel characterization of crop wild relatives and landraces resources as a basis for improved crop breeding" (PGR Secure) (November 2009);
- Update about various ongoing ECPGR items and issues (December 2009).

2. IMPLEMENTATION OF ECPGR PHASE VIII (2009-2013)

In October 2008 the Secretariat sent out the letters of invitation for countries to join Phase VIII of ECPGR to all National Coordinators. By the end of 2009, 30 countries had signed the Letter of Agreement for Phase VIII. Four other countries had not signed the Letter of Agreement but had, nonetheless, started to pay annual contributions for Phase VIII. Montenegro and Russian Federation joined ECPGR in 2009 as new members.

Relevant documents related to the implementation of Phase VIII have been made available through the ECPGR Web site. These are:

- ECPGR Terms of Reference (version 3, October 2008)
(http://www.ecpgr.cgiar.org/Introduction/ToRs_ECPGR_PhaseVIII.pdf).
- Country quota for Phase VIII (explanation)
(http://www.ecpgr.cgiar.org/Introduction/ECPGR_QuotaP8.pdf).

3. ACTIVITIES CARRIED OUT WITHIN THE NETWORKS

Following the approval during the Steering Committee meeting in September 2008 of the Networks' proposals for action and their related budgets, the Secretariat drafted a calendar of activities at the beginning of the Phase, in consultation with all the Network Coordinators.

Planned meetings and activities and their dates are reflected and kept up-to-date in the Networks' budget plans (available online from each Network's Web page (<http://www.ecpgr.cgiar.org/Introduction/Networks.htm>) and in the List of upcoming meetings (<http://www2.bioversityinternational.org/networks/ecpgr/meetings/nextmeeting.asp>).

3.1. Cereals Network

Working Groups: *Avena*, Barley and Wheat.

The **Cereals Network Coordinating Group (NCG)** consisted of seven members: Helmut Knüpffer, Germany (Network Coordinator); Iva Faberová, Czech Republic; Christoph Germeier, Germany; Marja Jalli, Finland; Andreas Katsiotis, Greece; Gert Kleijer, Switzerland; and Marcin Zaczynski, Poland.

A mission was organized by Andreas Katsiotis, Greece and Gideon Ladizinsky, Israel, to visit Cyprus and Crete in May 2009, aiming **to survey populations and collect samples from endangered wild *Avena* populations**, to be placed under long-term conservation.

In the case of Cyprus, the expedition was organized in collaboration with Angelos Kyrtzis from the Agricultural Research Institute, Nicosia, and resulted in the collection of 18 accessions of *Avena ventricosa*, 5 accessions of *Avena eriantha* and 5 accessions of *Avena hirtula*. Twenty accessions were collected from protected areas. The EURISCO descriptors were used for documentation. Accessions were stored in the Agricultural Research Institute's genebank and safety-duplicates were sent to the Agricultural University of Athens. *A. ventricosa* was found to be still present in Cyprus in areas where it had been recorded more than 75 years ago. Most of the areas visited were within Natura 2000 or National Forest protected sites, thus providing the environment for long-lasting *in situ* presence of the species with proper management and monitoring guidelines. The same holds true for *A. hirtula*. For both species a number of areas where they were not previously recorded were found. Most of these new sites are also within protected areas providing suitable conditions for *in situ* conservation of the species. Since large *A. hirtula* populations were found in a number of areas in Cyprus, the visit to Crete was not considered necessary and it was postponed. Similar research is needed to study the distribution of other *Avena* species and their diversity.

A pre-breeding workshop on cereals was held in Alnarp, Sweden on 24-25 November 2009. The workshop was organized by ECPGR, NordGen, the Swedish University for Agricultural Sciences (SLU), Graminor, Norway, MTT Agrifood Research Finland and Oatly AB, Sweden. Altogether 49 participants from 12 countries attended the meeting, which included 20 presentations in four themes: 1) Pre-breeding in cereals – status and examples of existing collaborations; 2) Breeding goals and needs; 3) Challenges of funding; and 4) Future needs and application.

It was suggested that a joint disease resistance database could be built up from various sources and experiences, including e.g. data on PGR reactions to different diseases and the availability of molecular markers. It was noted that in light of climate change, problems due to drought are also increasing in Europe. There is a need to develop phenotype tests suitable for abiotic stress tolerance and to apply them to relevant germplasm. Important initiatives to support utilization of PGR in pre-breeding would be to increase the online availability of characterization/evaluation data and to improve the dialogue between genebanks and breeders. A limiting factor was identified in the lack of specific funding programmes devoted to pre-breeding. A proposed solution to this limitation was lobbying in favour of pre-breeding at EU and national levels, and supporting the establishment of private-public collaboration, where they do not yet exist. Regarding future possible collaborations, it was observed that the stakeholders were genebanks (including AEGIS collaborative partners), plant breeding researchers, the European Seed Association (ESA), farmers' organizations, the Global Partnership Initiative for Plant Breeding Capacity Building (GIPB) and the CGIAR Centres, and that the proposals for collaboration should be framed within the International Treaty or on a regional basis.

One of the conclusions of the workshop was the decision to form a task force to produce concept notes on pre-breeding issues. Ten participants volunteered for this and a concept note on small grain cereals is now ready and publicly available on the ECPGR Web site at:

http://www.ecpgr.cgiar.org/Networks/Cereals/PreBreeding_Concept_Note.pdf

The workshop's presentations are also available at:

<http://www.nordgen.org/index.php/en/Innehaall/Activities/Cereal-Pre-Breeding-Workshop>

The **ECPGR project for urgent regeneration and safety-duplication activities**, funded by the Global Crop Diversity Trust, started its operation in 2009. In the case of cereals, six countries were involved in the regeneration of wheat or *Aegilops* (Armenia, Belarus, Bulgaria, Georgia, Hungary and Israel), five countries in the regeneration of barley (Armenia, Belarus, Greece, Hungary and Israel) four countries in the regeneration of maize (Azerbaijan, Bulgaria, Georgia and Hungary) and three countries in the regeneration of sorghum (Azerbaijan, Bulgaria and Georgia). Out of the 3990 cereal accessions that are expected to be regenerated with the support of the project, 1798 (45%) have been grown and have completed their cycle during 2009. Of these, 1522 accessions (85%) were successfully regenerated. These represent 38% of the total expected in the two-year project. The regeneration of cereals generally resulted in a success rate above 90%, with a few exceptions, i.e. wild barley in Israel, maize in Hungary and sorghum in Bulgaria. In all cases the problem was insufficient yield.

The Cereals Network submitted five **proposals for funding to the AEGIS Grant scheme**. These were prepared by partners from Azerbaijan (wheat), Czech Republic (barley, oats and rye), Georgia (*Aegilops*) and Ukraine (one on maize and one on millet).

The Report of a Cereals Network, Second Meeting, 21-24 April 2008, Foça, Turkey was published on-line in a draft form at:

http://www.ecpgr.cgiar.org/Networks/Cereals/Cereals_Network_2ndMeeting_Draft_Feb09.pdf

Outlook for 2010: activities planned by the Network include a mission to collect and survey wild *Avena* accessions in Sicily, Italy and Andalusia, Spain (May 2010). The Sixth Meeting of the *Avena* Working Group is planned for 21–23 October 2010 in Romania.

3.2. Forages Network

Working Group: Forages.

The **Forages Network Coordinating Group** consisted of seven members: Merja Veteläinen, Finland (Network Coordinator); Beat Boller, Switzerland; Lajos Horváth, Hungary; Chris Kik, The Netherlands; Petter Marum, Norway; Valeria Negri, Italy; and Evelin Willner, Germany.

The **Network Coordinating Group organized a self-funded *ad hoc* meeting** on 11 May 2009 in La Rochelle, France, in connection with the 28th Meeting of the Fodder Crops and Amenity Grasses Section of EUCARPIA. The participants attending the meeting were Evelin Willner, Petter Marum, Beat Boller and Merja Veteläinen.

Considering the inefficient fragmentation of the Forages databases (23), it was agreed to try to merge databases by taxa/DB manager and to obtain confirmation from the DB managers and the respective institute about the availability to continue the management of the related databases.

In situ and on-farm conservation were reiterated to be important activities for conservation and use of forages. A preliminary inventory of existing European conservation sites was thought to be the first important step to enhance this activity and Beat Boller, Switzerland, agreed on the task to provide information about the development of a Swiss solution for *in situ*/on-farm conservation at the next WG meeting.

With regard to the AEGIS activities and the expected submission of a project proposal under the EU 7th Framework Programme (FP7) Capacities Work Programme 2010, Research Infrastructures, the Group expressed the need to review and update different guidelines (collecting, regeneration, etc. of forage crops) developed by the Forages WG and to compile them into one single publication to be used by the forage crop germplasm holders. The Group also thought that a forage crop (e.g. perennial ryegrass or red clover) should become a model crop for AEGIS, since these crops are generally cross-pollinating and thus more problematic to characterize and evaluate than self-pollinating crops. Thus there is an urgent need to establish a common method. On the other hand, there is already a well-established cooperation between plant breeders and germplasm curators in this field.

The report of the meeting is available at:

http://www.ecpgr.cgiar.org/Networks/Forages/Ad_hoc_Forages_NCG_La_Rochelle_2009_final.pdf

The Forages Network did not submit **proposals for funding to the AEGIS Grant Scheme**, but decided to send an application for the second call.

Outlook for 2010: activities planned by the Network include the Tenth Meeting of the Working Group on 27–29 April 2010, Poel Island, Germany.

3.3. Fruit Network

Working Groups: *Malus/Pyrus*, *Prunus* and *Vitis*.

The **Fruit Network Coordinating Group** consisted of seven members: Marc Lateur, Belgium and Emilie Balsemin, France (Interim Co-Coordinator); Daniela Benediková, Slovakia; Stein Harald Hjeltnes, Norway; Erika Maul, Germany; Matthew Ordidge, United Kingdom; and Jesus Ortiz, Spain.

A detailed plan was prepared by the Network Coordinating Group members for the harmonization of the four European Fruit Databases and the sharing of tools to assist in assessing trueness-to-type of the European accessions. The plan foresees harmonization of passport and primary characterization descriptors, and harmonization of guidelines for inclusion of photographs in the fruit databases. A photo gallery module is planned to be established in the *Vitis* database and then transferred to the other databases to assist in comparing pictures of different accessions to ascertain their trueness-to-type. Further technical development of the existing SynoPyrus software for synonym searches will be followed by its installation in all the Fruit Databases.

Draft guidelines for inclusion of photographs in the ECPGR European Fruit Databases were prepared.

A new version of the European *Vitis* Database (www.eu-vitis.de) was made accessible online.

The Fruit Network submitted one **proposal for funding to the AEGIS Grant Scheme**. This was prepared by partners from the Czech Republic on the subject of “*In vitro* slow growth storage as a method for safety-duplicate maintenance and distribution of European Accessions in the framework of an apple fruit genebank”.

Outlook for 2010: activities planned by the Network include the Eighth Meeting of the *Prunus* Working Group on 7–9 September 2010, Forli, Italy. The *Malus* DB is expected to be further developed at the University of Reading, UK, with updates to the accession lists started and conversion of the DB to a Web-based system.

3.4. Oil and Protein Crops Network

Working Group: Grain Legumes.

The **Oil and Protein Crops Network Coordinating Group** consisted of four members: Mike Ambrose, United Kingdom (Network Coordinator); Siyka Angelova, Bulgaria; Andrea Carboni, Italy; and Gérard Duc, France.

The **ECPGR project for urgent regeneration and safety-duplication activities**, funded by the Global Crop Diversity Trust, started its operation in 2009. In the case of grain legumes, six countries (Albania, Azerbaijan, Bulgaria, Georgia, Hungary and Portugal) were involved in the regeneration of chickpea, common bean, cowpea, faba bean, grasspea and lentil. Out of the 1255 grain legume accessions that are expected to be regenerated with support of the project, 691 (55%) have been grown and have completed their cycle during 2009. Of these, 414 accessions (60%) were successfully regenerated. These represent 33% of the total expected in the two-year project. The rate of successful regeneration of grain legumes was particularly low in the case of cowpea and faba bean due to low germination or insufficient yield.

The Oil and Protein Network submitted three **proposals for funding to the AEGIS Grant Scheme**. These were prepared by partners from Azerbaijan (food legumes), Czech Republic (pea) and Ukraine (sunflower).

The **ECPGR *Glycine* database**, maintained by the N.I. Vavilov Research Institute of Plant Industry (VIR), St. Petersburg, Russian Federation, has been searchable online since April 2009 at:

http://www.vir.nw.ru/glycine/euro_gi.htm

The report of a Working Group on Grain Legumes, Fourth Meeting, 16-17 November 2007, Lisbon, Portugal, was published on-line as a draft in 2009 and finalized in 2010, and is available at:

http://www.ecpgr.cgiar.org/workgroups/grain_legumes/Grain_Legumes_Lisbon_2007_FINAL.pdf

Outlook for 2010: activities planned by the Network include the Fifth Meeting of the Grain Legumes Working Group in Antalya, Turkey on 22-23 April 2010, including the *ad hoc* meeting of the Grain Legume Database Managers.

3.5. Sugar, Starch and Fibre Crops Network

Working Groups: *Beta*; Fibre Crops (Flax and Hemp); Medicinal and Aromatic Plants (MAPs); Potato.

The **Sugar, Starch and Fibre Crops Network Coordinating Group** consisted of four members: Lothar Frese, Germany (Network Coordinator until October 2009); Roel Hoekstra, The Netherlands (Network Coordinator as of October 2009); Martin Pavelek, Czech Republic; and Ana Maria Barata, Portugal.

The **Network Coordinating Group held its third meeting in Quedlinburg, Germany on 8-9 October 2009**. The meeting reviewed the Network budget and workplans, taking note that the budget for actions in Phase VIII was directed to the *Origanum* project of the MAP WG instead of funding several small projects for all the crops. It was noted that methodologies and tools for the *in situ* management of crop wild relatives applied for *Beta* and other model crops by the AEGRO project (<http://aegro.bafz.de/>) will be of interest to the MAP Working Group, specifically a survey data recording tool that was developed to assist *in situ* management of *Beta* species using the software tool kit CyberTracker. This tool kit, as well as a crop-specific application is freely available (see also Section 3.8 below).

It was noted that cultivation of flax and hemp has decreased considerably in Europe during recent years due to imports e.g. from China. Moreover, at the Centro di Ricerca per le Colture Industriali, Bologna, Italy, research on hemp has ceased.

The European Cultivated Potato Database maintained by SASA, United Kingdom, is progressing well, also thanks to the possibility for collection curators to enter their data directly via an online tool for data input (http://www.ecpgr.cgiar.org/databases/Crops/potato_cult.htm). The Wild Potato Database was also recently updated and is available as a downloadable system:

http://www.ecpgr.cgiar.org/databases/Crops/potato_wild_tuber.htm

The NCG is convinced that although this Network deals with a very wide range of crops, synergies can be created by a stronger cooperation in the field of data documentation and *in situ* management.

The report of the meeting is available at:

http://www.ecpgr.cgiar.org/Networks/Indus_crops/Sugar%20Starch%20Fibre%20Crops%20NCG%203rd%20meeting%20Quedlinburg%20final.pdf

The Fourth Meeting of the WG on Medicinal and Aromatic Plants (MAPs) was held on 29 September-1 October 2009 in Kuşadası, Turkey. The finalization of the crop-specific characterization and evaluation descriptors for the ten target species selected by the WG was given high priority.

Documentation of *ex situ* collections will follow the EURISCO channels and procedures; for *in situ* populations, members will continue to use their own tools until a common ECPGR database is developed for this purpose at the regional level.

The workplan for the ECPGR Network project for "Conservation and characterization of oregano (*Origanum vulgare* L.) wild populations in Europe" was agreed and will include: sampling of oregano populations, study of their genetic and chemical variability; documentation; and distribution of collected data. The number of project partners reached 19, with the University of Veterinary Medicine in Vienna as subcontractor for molecular and chemical analyses. The data collected within the Oregano Project would contribute to the selection of oregano accessions to be included in a European Collection according to the AEGIS concept.

Plans were made to expand the priority list of MAP species and to produce a document showing the level of threat and the Red List status for MAP species in Europe.

Appropriate areas for future collaboration were identified with the need to increase the focus on *in situ* conservation of MAPs; the potential of *in vitro* or cryopreservation methods to improve the status of safety-duplication of MAP collections, which is insufficient; the usefulness of micropropagation methods for rare and threatened species, for conservation and reintroduction of species into former habitats and for commercial production of plants and MAP products.

The draft report is available at:

http://www.ecpgr.cgiar.org/Workgroups/Med_aromatic/MAP_4_Kusadasi_updated%20draft%20Web%20181209.pdf

An ECPGR-funded Network project was completed at the Julius Kühn-Institute, Quedlinburg, Germany, to redesign an application for updating Multi-crop Passport Descriptors and for duplicate searches for the European Central Crop Databases, as well as for updating the International Database for *Beta*.

The following **Network reports were printed:**

- Report of a Working Group on *Beta* and the World *Beta* Network. Third Joint Meeting, 8-11 March 2006, Puerto de la Cruz, Tenerife, Spain

http://www.ecpgr.cgiar.org/Workgroups/beta/09_47_ECPGR_BETA_WEB.pdf

- Report of a Working Group on Medicinal and Aromatic Plants. Second Meeting, 16-18 December 2004, Strumica, Macedonia FYR / Third Meeting, 26-28 June 2007, Olomouc, Czech Republic

http://www.ecpgr.cgiar.org/Workgroups/Med_aromatic/MAP2_3.pdf

The Sugar, Starch and Fibre Crops Network submitted one **proposal for funding to the AEGIS Grant Scheme**. This was prepared by the partner from Slovenia (*Origanum* and *Gentiana*).

Outlook for 2010: activities planned by the Network include: the Second Meeting of the Fibre Crops (Flax and Hemp) Working Group on 7-9 July 2010, Šumperk, Czech Republic and the completion of the oregano project (Inventory, survey and molecular and chemical analysis of *Origanum vulgare* L. in Europe).

3.6. Vegetables Network

Working Groups: *Allium*, *Brassica* Cucurbits, Leafy Vegetables, Solanaceae and Umbellifer Crops.

The **Vegetables Network Coordinating Group** consisted of 11 members: Dave Astley, United Kingdom (Network Coordinator until November 2009); Marie-Christine Daunay, France (Network Coordinator as of November 2009), Noortje Bas, The Netherlands; Ferdinando Branca, Italy; Maria José Díez, Spain; Willem van Dooijeweert, The Netherlands; Emmanuel Geoffriau, France; Joachim Keller, Germany; Teresa Kotlińska, Poland, replaced by Charlotte Allender, United Kingdom in November 2009; Katerina Karlová-Smékalová, Czech Republic; and Rob van Treuren, The Netherlands.

The **Vegetables Network held its Third Meeting in Catania, Italy**, on 10-12 November 2009, hosted by the University of Catania. About 60 representatives of the six WGs gathered from 30 countries to discuss cooperative action for vegetable genetic resources conservation and use. The main objective of the meeting was to make the European Genebank Integrated System (AEGIS) work within the framework of the Vegetables Network, by ensuring that all the members understand what it is, how it intends to operate and also to understand its technical and scientific concepts, as well as the responsibilities of each member within their country and as a member of the Network. The experiences gained by the model crop groups (*Allium* and *Brassica*) and by the Solanaceae WG in their attempt to identify Most Appropriate Accessions (MAAs) were shared with the meeting. It was agreed that a positive approach to deciding what should be included in the European Collection would be to focus, as a first step, on what needs to be conserved rather than on what should be excluded. Efforts will be made to complete the Central Crop Databases as well as to include missing data into EURISCO. Efforts to identify MAAs will focus, as a priority, on leek and wild Alliums, lettuce and spinach, carrot, melon, *B. rapa* and various Solanaceae crops. A general consensus was expressed by the Group about the principles of AQUAS and the need to define common standards.

Surveys of wild relatives of *Allium* and Umbellifer crops in collections and in the wild are planned during Phase VIII, to identify gaps in the collections and to carry out characterization work. Characterization activities are also planned for collections of *B. rapa* and wild brassicas.

Surveys of landraces are planned by the *Allium* WG, while the Cucurbits WG intends to survey on-farm conservation activities. Work on the definition of descriptors was scheduled by the Leafy Vegetables WG (for asparagus and minor leafy vegetables) and by the Umbellifer Crops WG (agreed minimum lists). Improving safety-duplication will be a task for the *Allium*, Cucurbits, Leafy Vegetables, Solanaceae and Umbellifer Crops WGs. The assessment of virus elimination training needs in Europe and the establishment of a Web Portal will be specific activities of the *Allium* WG.

After the resignation of Dave Astley (Warwick HRI, United Kingdom) as Coordinator of the Network, the Network Coordinating Group nominated Marie-Christine Daunay (INRA, France) as its new Coordinator, with Willem van Dooijeweert taking the role of Vice-Coordinator.

During the Umbellifer Crops WG session, as part of the Vegetables Network meeting in November 2009, Emmanuel Geoffriau, France was confirmed as the Chair of the WG and Charlotte Allender was selected as Vice-Chair, replacing Teresa Kotlińska, Poland. The draft report of the meeting and the presentations made are available on the ECPGR Web site at:

http://www.ecpgr.cgiar.org/Networks/Vegetables/VEGNET_3_%20Catania_revised_full_report.pdf

As of January 2009, a new search option became available for the **ECPGR Tomato Database**, maintained at CGN, Wageningen, The Netherlands. This tool allows grouping of “probable duplicates” by comparing data in the following fields: accession name, collecting number, donor number and other numbers. This tool offers a guide for the selection of material and is also a first step towards the selection of MAAs in tomato. A total of 7892 accessions were assigned to 2491 duplication groups. As of March 2009, it is also possible to search about 1200 accessions in the Tomato database for the minimum characterization descriptors agreed upon by the Solanaceae WG.

The **European Brassica Database** (<http://documents.plant.wur.nl/cgn/pgr/brasedb>) was updated. The database can be searched online for probable duplicate accessions in the *Brassica rapa* collections which, as of October 2009, include a total of 3621 accessions. Probable duplicates were assessed by comparing names and donor/collection/other numbers as well as known synonyms. A total of 1698 accessions were assigned to 545 *B. rapa* duplication groups.

A total of 866 **safety-duplicate accessions of cucurbit crops** were sent under a black-box arrangement by IPGR Sadovo, Bulgaria to CGN, Wageningen, The Netherlands.

The Vegetables Network submitted five **proposals for funding to the AEGIS Grant Scheme**. These were prepared by partners from Germany (garlic), Portugal (*Brassica oleracea*), United Kingdom (*Brassica* and Umbellifer crops) and Ukraine (eggplant).

The Network started elaborating an overview of the management activities of collection holders, following the example of the Brassica WG in the framework of the AEGIS pilot study. However, the coordination of this initiative was subsequently taken over by the ECPGR Secretariat as part of the implementation of the Quality System for AEGIS.

As part of the collaboration with ECPGR for the AEGIS implementation, a Master Thesis was started by Andreas Breuing, University of Hannover, on the "Evaluation of costs for long-term storage of *Allium sativum* genetic resources at the Gatersleben genebank – Comparison of the methods, field maintenance and cryopreservation". Daniel Horna from the International Food Policy Research Institute (IFPRI), Washington DC, USA, assisted in the definition of the strategy for this study.

The following **report** was made available on the Web: Report of a Vegetables Network. Second Meeting, 26–28 June 2007, Olomouc, Czech Republic

http://www.ecpgr.cgiar.org/Networks/Vegetables/VEGNET_2_Olomouc.pdf

Outlook for 2010: activities planned by the Network include: the Fourth *Brassica* WG Meeting on 2-3 March 2010, Linguaglossa, Italy; the Second Meeting of the Cucurbits WG on 9-11 November 2010, Tbilisi, Georgia; activities to improve safety-duplication of Cucurbits and Solanaceae; and development and implementation of specific algorithms to facilitate the identification of duplicates in databases. The Vegetables Network will also submit a paper to the 28th International Horticulture Congress (IHC) to be held in Lisbon, Portugal on 22-27 August 2010. This will be prepared by the NCG members and will summarize the Network's achievements. The Network is expected to contribute to the validation of a template for an operational genebank and to the development of generic operational genebank standards, as well as to start the drafting of minimum crop standards in order to progress with the implementation of AEGIS.

3.7. Documentation and Information Network

The **Documentation and Information Network Coordinating Group** consisted of 11 members: Frank Begemann, Germany (Network Coordinator); Iva Faberová, Czech Republic; Theo van Hintum, The Netherlands; Helmut Knüpfner, Germany; Jonas Nordling, Sweden (NordGen); Idin Fazlic, Bosnia and Herzegovina (SEEDNet); Ahmet Semsettin Tan, Turkey; Ian Thomas, United Kingdom. The *ex officio* representatives were Sónia Dias and Lorenzo Maggioni, ECPGR Secretariat, Rome; Michael Mackay, Bioversity International, Rome; and José Iriondo, Spain (*In situ* and On-farm Network representative).

An **EPGRIS3 self-funded workshop** was held on 7 May 2009 at the Bundesanstalt für Landwirtschaft und Ernährung (BLE) in Bonn, Germany, including 12 participants collaborating in EPGRIS3 activities 2-05 (Characterization and Evaluation data) and 2-06 (Link to the ECPGR Central Crop Databases).

A proposal for inclusion of characterization and evaluation (C&E) data into EURISCO, presented by Theo van Hintum, CGN, The Netherlands, was discussed and reached general consensus around the following concepts:

- "It is not feasible to enforce any standardization in terms of experimental design, the use of standards or even the scale of measurement";
- "All (potential) data donors should be able to export their data, as they have it, in a common format, provided that this is a flexible format";
- "The value of C&E data is that high to a user that she/he is willing to invest time in analyzing the data".

The principle of creating a repository of non-standardized C&E data in the framework of EURISCO was also adopted, with the addition that the repository should only be used for non-confidential data. It was stressed that only C&E data on accessions already in EURISCO could be uploaded. However, it was decided that any registered "uploader" (the National Focal Point, or someone approved by the

NFP) can upload data on any EURISCO accession, i.e. not only on accessions in the National Inventory of the “uploader”. More details on this workshop are available at:

<http://www.epgris3.eu/EPGRIS3%2020090507workshop.htm>

A revised proposal for inclusion of C&E data into EURISCO, including a road map, was then drafted, circulated to the Network members and sent for information to the Steering Committee. The proposal was eventually approved by the Documentation and Information Network in June 2009 (see <http://www.epgris3.eu/docs/activities/2-05/Inclusion%20of%20C&E%20data.pdf>).

The road map to the inclusion of C&E data into EURISCO was revised in July 2009. This foresees a process of collaboration with Bioversity International, apart from the implementation of the procedures in EURISCO, also specifically in the context of the development of the GENESYS catalogue of the Global Information on Germplasm Accession (GIGA) project. A self-funded meeting to discuss the options for creating synergies between EURISCO and GENESYS was held at CGN in Wageningen, The Netherlands in December 2009. CGN, NordGen, BLE and IPK made themselves available to deliver the first data sets for developing and testing the EURISCO infrastructure in Rome.

The Network was heavily involved in the preparation of the EUROGENEBANK project proposal, that was submitted for funding in December 2009 under the EU 7th Framework Programme call for proposals on “Research Infrastructures – Support to existing research infrastructures – Integrating Activities”. Two Work Packages focusing on documentation aspects were prepared (WP7 and WP8):

- WP7, coordinated by the Centre for Genetic Resources (CGN), The Netherlands, intending to “Upgrade PGR information management and interfaces”. This Work Package was strongly based on the “wish list” as developed by EPGRIS3, and involved the following participants: Bioversity International, Italy; the Federal Agency for Agriculture and Food (BLE), Germany; the Crop Research Institute (CRI), Czech Republic; the Institute of Biological, Environmental and Rural Sciences, Aberystwyth University (IBERS), UK; the Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK), Germany; the Julius-Kühn-Institut - Bundesforschungsinstitut für Kulturpflanzen (JKI), Germany; The Nordic Genetic Resource Center (NordGen), Sweden; and the Royal Museum for Central Africa (RMCA) Belgium. Planned tasks included: the creation of crop portals for a number of model crops; data mobilization for more and better data in EURISCO; increased quality and quantity of EURISCO passport data; improved public Web-interface to EURISCO; application of Web-services technology for uploading National Inventory data to EURISCO; creating a repository and interface for C&E data; and creating trait ontology on the basis of the C&E data repository.
- A second Work Package (WP8), led by Bioversity International, intended to “Ensure free access to data through EURISCO”, with the aim to provide support (i.e. training, seminars and helpdesk function) to users, improve functionalities and add new tools to EURISCO.

H. Knüpfner (IPK, Gatersleben) represented the ECPGR Documentation and Information Network in the International Organizing Committee of the annual conference of Biodiversity Information Standards (TDWG; www.tdwg.org) on “E-Knowledge about Biodiversity and Agriculture”, held 9-13 November 2009 in Montpellier, France. For the first time, a TDWG conference focused on agriculture and plant genetic resources. Out of almost 300 participants, more than 50 represented agricultural research and plant genetic resources, half of these from France, and about ten represented ECPGR. A number of presentations, parallel working sessions and posters were devoted to aspects of plant genetic resources documentation and information.

EURISCO in 2009

The European countries’ representation within EURISCO increased to 40 countries, with the inclusion of the National Inventories (NIs) of Belarus, Croatia and Montenegro.

Regarding the National Inventory Focal Points (NFPs), 12% were newly appointed and 14% were replaced, thereby requiring support and training from the Secretariat.

The EURISCO Web site content was updated with information, public awareness materials, documents and links to other important sources of information.

Three more downloadable EURISCO fact sheets were made available, now covering 15 different languages (see: http://eurisco.ecpgr.org/releases/fact_sheet.php). Translations were provided as

in-kind contributions by the NFPs. In 2009, the Albanian, Armenian, Portuguese, and Russian versions were made available for the first time.

The EURISCO poster was updated several times and is available for download at:

<http://eurisco.ecpgr.org/releases/posters.php>

In an attempt to further increase the taxonomy data quality in EURISCO and the National Inventories, a total of 333 reports were sent to the NFPs in December 2009. In these reports, all the taxa of a given National Inventory that did not match or only partially matched the GRIN Taxonomy were indicated, inviting the NFPs to check whether it would be appropriate to make corrections in their country's genebank documentation systems and in their National Inventories.

EURISCO data were regularly provided to GBIF (Global Biodiversity Information Facility). At the 10th Meeting of the GBIF Participant Nodes Manager Committee in Copenhagen, 2-5 October 2009, a poster was presented, entitled "EURISCO, European Plant Genetic Resources Portal: A Biodiversity Thematic Network in GBIF".

At the TDWG annual conference on "E-Knowledge about Biodiversity and Agriculture" on 9-13 November 2009, Montpellier, France, EURISCO was presented with an oral presentation, a computer demonstration and a poster.

Four "EURISCO Seminars and Trainings" were organized with the objective of strengthening national capacity in data exchange and the sustainability of EURISCO, as well as to improve data completeness by enhancing the quality and quantity of data flow into the Catalogue. These seminars and trainings were held in Yerevan, Armenia (April 2009), St. Petersburg, Russian Federation (May 2009), Kharkov, Ukraine (October 2009) and Banja Luka, Bosnia and Herzegovina, where Serbian partners also attended (November-December 2009). In addition, a "Training workshop" was held in Prague, Czech Republic, 29-30 June 2009, partly funded by the Documentation and Information Network as an activity (5-01) of the EPGRIS3 self-funded project. Funding from ECPGR and the South East European Development Network on Plant Genetic Resources (SEEDNet) allowed the participation of 30 National Focal Points and documentation experts.

These seminars and trainings have involved a total of 113 people, have contributed to the updating of the National Inventories and resulted in agreed outputs and recommendations for the National Inventories. For more information see: http://eurisco.ecpgr.org/contact_menu/training.php.

During 2009, the number of visitors to EURISCO reached more than 7500, with a 50% increase in new visitors, and almost 50% of visitors returning. The information maintained in EURISCO has been searched from 102 countries (26 countries more than in 2008).

Two e-bulletins (July and December) were made available on the EURISCO Web site (<http://eurisco.ecpgr.org/releases/issues.php>), as well as disseminated via e-mail to more than 200 individuals. Three external contributions were provided, by Armenia and GRIN Global in July and by Bosnia and Herzegovina in December. Three articles giving updates on EURISCO were published in the 2009 issues of Bioversity's Newsletter for Europe.

The process for the renewal of the EURISCO data sharing agreement for the period of 2010-2020 was initiated. The data sharing agreement will be compliant and in harmony with the International Treaty on Plant Genetic Resources for Food and Agriculture and also with EURISCO's function as a network data provider to other major PGR information hubs of significant interest for the PGR community.

Some facts and numbers are worth highlighting regarding changes and improvements in EURISCO during 2009:

- The total number of accessions has decreased by 84 226, reaching a total of 1 049 469 accessions in December 2009;
- Three new NIs joined (Belarus, Croatia and Montenegro), raising the number of participating countries to 40;
- There was an increase of 46 data sources, reaching 297 institutes conserving PGR;
- The number of species names (including synonyms and spelling variants) represented in EURISCO increased by 25 817 species, reaching 34 556 species;
- More than 47% of the NIs were updated during 2009;
- As for the type of materials maintained in these NIs and searchable through EURISCO, these are "wild" 10%, "landraces" 25%, "breeding" 15% and "improved cultivars" 19% of the total material documented in EURISCO;

- Multilateral System (MLS) registration increased from 14% in 2008 to almost 20% in 2009 of the EURISCO total accessions, and from 11 to 13 countries. MLS accessions registered in EURISCO cover around 66% of the genera from Annex I of the ITPGRFA.

Outlook for 2010: activities planned by the Network include the organization of the Fourth Meeting of the Network Coordinating Group in Maccaresse, Italy on 17-18 February 2010, and the organization of a Second Capacity Building Inter-regional Workshop on International Treaty Implementation, jointly with the Inter-regional Cooperation Network.

3.8. *In situ* and On-farm Conservation Network

WGs: On-farm Conservation and Management; Wild species Conservation in Genetic Reserves.

The *In situ* and On-farm Conservation Network Coordinating Group consisted of seven members: Nigel Maxted, United Kingdom (Network Coordinator); Lothar Frese, Germany; Paul Freudenthaler, Austria; José Iriondo, Spain; Valeria Negri, Italy; Zdeněk Stehno, Czech Republic; and Jens Weibull, Sweden.

The Network has been involved in the preparation of the project proposal for “Novel characterization of crop wild relatives and landraces resources as a basis for improved crop breeding” (**PGR Secure**), submitted in January 2010 to the EU FP7 funding scheme for Collaborative Projects (KBBE.2010.1.1-03 – Characterization of biodiversity resources for crop wild relatives to improve crops by breeding). The project aimed to research novel characterization techniques and conservation strategies for European crop wild relative and landrace diversity, and to further enhance crop improvement by breeders, as a means of underpinning European food security in the face of climate change. Partners in the project included: University of Birmingham, UK (Coordinator); Plant Research International, The Netherlands; ServiceXS BV, University of Nottingham, UK; Bioversity International; University of Perugia, Italy; Centre for Genetic Resources, The Netherlands; Julius Kühn-Institut, Germany; Nordiskt Genresurscenter, Sweden; MTT Agrifood Research, Finland; and Universidad Rey Juan Carlos, Spain. To achieve its aim, the project will include four research themes:

1. Novel characterization techniques, including: (1a) Genomics, phenotyping and metabolomics, (1b) Transcriptomics, (1c) Focused Identification of Germplasm Strategy.
2. Crop Wild Relatives (CWR) and Landraces (LR) conservation, including: (2a) Europe-wide CWR inventory; (2b) Exemplar national CWR inventories; (2c) European CWR strategy; (2d) Europe-wide LR inventory; (2e) Exemplar national LR inventories; (2f) European LR strategy.
3. Facilitating breeders’ CWR and LR use, including: (3a) Identifying breeders’ needs; (3b) Meeting breeders’ needs; (3c) Integration of conservation and user communities.
4. Informatics development, including: (4a) CWR and LR inventory information Web availability; (4b) Novel characterization information Web availability; (4c) Inter-information system operability.

Through the use of the ECPGR listserver, the ECPGR Secretariat helped the project coordinator to obtain letters of support for the project proposal from the ECPGR National Coordinators. It is expected that the project will base its implementation on the Network of ECPGR *in situ*/on-farm National Inventory Focal Points, the respective National Inventories and EURISCO as European Inventory for Plant Genetic Resources (*ex situ* and *in situ*/on-farm). The project is expected to involve 42 European countries, as well as large and smaller European plant breeding companies.

The second coordination meeting of the project “An Integrated European *In Situ* Management Work plan: Implementing Genetic Reserves and On Farm Concepts (**AEGRO**)” took place in Almeria, Spain on 14–16 September 2009. The project is funded by the European Commission, DG AGRI within the framework of Council Regulation 870/2004. AEGRO is an initiative of the members of the Coordinating Group of the ECPGR *In situ* and On-farm Conservation Network in collaboration with

the ECPGR Crop Networks. The project addresses issues relating to the development of national crop wild relatives and landrace conservation strategies, data sourcing, data acquisition and modelling, use of GIS technologies, and aspects of practical site management and monitoring. It further pursues the common goal of halting the loss of genetic diversity in European crop wild relatives and landraces, thus helping the PGR community meet its obligations under the European Strategy for Plant Conservation 2008-2014.

Methods for planning of landrace on-farm conservation activities were developed, an inventory of landrace occurrences in Italy created, criteria to be taken into account for giving priority among areas defined, a landrace management strategy formulated and the strategy tested. It allowed selecting those areas that include the maximum landrace and ecological diversity as well. In addition, this exemplary work formed the basis of workpackage 2 of the PGR Secure project.

A Web-based helpdesk has been developed and tested by project partners. The CWR *In Situ* Strategy Helpdesk is a guide and information facility for National Programmes, research institutes, NGOs, protected area managers or individuals involved in the development of a crop wild relative (CWR) *in situ* conservation strategy. It provides a list of CWR data types and sources. The helpdesk information was made publicly available in October 2009 (<http://aegro.bafz.de/index.php?id=188>).

The Crop Wild Relatives Information System – Population Level Information System (CWRIS-PLIS) is also online. This is a core functionality of the AEGRO project (<http://aegro.bafz.de/index.php?id=168>). Four independent modules are being developed for *Avena*, *Beta* (http://aegro.bafz.de/aegroprod_beta/home.seam), *Brassica* and *Prunus*, allowing the search for occurrence within a specific species. PLIS combines different data sources and uses harmonized data. It allows: (i) search for occurrences by taxon information; (ii) search for occurrences by geographic information; (iii) combined search for occurrences by geographic information (Eurostat administrative units, NUTS, LAU) and Natura 2000 protected areas. A survey data recording tool was developed to assist *in situ* management of *Beta* species using the software tool kit CyberTracker. This tool kit, as well as a crop-specific application, is freely available.

Four model crops (oat, beet, brassicas and cherry) are used to test the genetic reserve conservation technique. Advanced drafts of genetic reserve guidelines were produced by all model crop project teams describing concepts concerning the establishment of genetic reserves. These guidelines contain a list of candidate sites recommended for the establishment of genetic reserves for individual species and occurrences. The documents will be circulated within the ECPGR Working Groups with a request for discussion and feedback.

The CWR helpdesk, the Population Level Information System, the landrace management strategy, genetic reserves guidelines for a number of model crops as well as the identification of Most Appropriate Areas for genetic reserves establishment (a task to be performed in the last year of the project) is a contribution of AEGRO to the *in situ* and on-farm management activities of the ECPGR Programme.

As part of the EC project Diverseeds (“Networking on conservation and use of plant genetic resources in Europe and Asia”), and in collaboration with the ECPGR Secretariat, the University of Perugia, Italy progressed in the compilation of a Web database of on-farm research and coordination institutions and their contact points in Europe. This database is aimed at facilitating the exchange of information among on-farm and in-garden institutional stakeholders. At the end of 2009, a prototype database was available on the University of Perugia Web site (<http://www.sharinginformation.eu/>).

The following **Network publications** were printed and published on the Web:

- Vetelainen M, Negri V and Maxted N. 2009. European landraces: on-farm conservation, management and use. Bioversity Technical Bulletin no. 15.
http://www.bioversityinternational.org/publications/publications/publication/issue/european_landraces_on_farm_conservation_management_and_use-1.html
- Bailey A, Eyzaguirre P, Maggioni L. 2009. Crop genetic resources in European Home Gardens. Proceedings of a Workshop, 3-4 October 2007, Ljubljana, Slovenia.
http://www.bioversityinternational.org/publications/publications/publication/issue/crop_genetic_resources_in_european_home_gardens_proceedings_of_a_workshop_3_4_october_2007_ljublj.html

The following **report** was made available on the Web:

- Report of a Task Force on On-farm Conservation and Management. Third Meeting, 2-3 October 2007, Ljubljana, Slovenia.
http://www.ecpgr.cgiar.org/Networks/Insitu_onfarm/Rep_TF_OnfarmCons_final.pdf

Outlook for 2010 and 2011: activities planned by the Network include the organization of a Symposium for the establishment of European genetic reserves for CWR and landraces (Funchal, Madeira, Portugal, 13-16 September 2010), i.e. a joint meeting of the *In situ* and On-farm Conservation Network and the EU project AGRI GENRES 057 – AEGRO. As part of the symposium, the two Working Groups of the Network will meet for the first time in the new “Working Group” arrangement. In association with the IUCN CWR Specialist Group, many CWR Working Group members will attend an IUCN Red List Workshop in Cascais, Portugal in mid-April 2010, with the aim of completing the IUCN Species Red List documentation for a number of European CWR species.

The **PGR Secure** project is expected to start in February 2011. It will build on the knowledge and skills of the *In situ* Network and ECPGR *in situ*/on-farm National Inventory Focal Points, and on two workshops focusing respectively on CWR and LR conservation and use which are to be organized in the Summer of 2011.

3.9. Inter-regional Cooperation Network

The **new Terms of Reference** for the Inter-regional Network Coordinating Group/Task Force were drafted by the Secretariat and agreed by the Steering Committee in February/March 2009, including the composition of the NCG.

The agreed Terms of Reference were the following:

“During Phase VIII, the Inter-regional Cooperation Network Coordinating Group will coincide with the Inter-regional Cooperation Task Force, with the following task:

<<Organization of one or two Inter-regional Workshops, in collaboration with Bioversity and the Treaty Secretariat, with the objective to convey to other regions similar views to those prevailing in Europe as regards the sharing of tasks, material and information, at the same time facilitating and promoting the ratification and implementation of the International Treaty. The Task Force will also liaise with other ECPGR Networks/WGs expressing specific interest for inter-regional cooperation.>>

The composition of the Inter-regional Cooperation Network Coordinating Group (4-5 persons) will be defined by the Secretariat, on the basis of nominations received from the National Coordinators until 10 February 2009.”

The **Inter-regional Cooperation Network Coordinating Group** consisted of five members: Frank Begemann, Germany (Network Coordinator); Merja Veteläinen, Finland; Petra Engel, Italy; Silvia Strajeru, Romania; and Ayfer Tan, Turkey.

A workshop for capacity building was organized in March 2009 in Entebbe, Uganda, jointly by ASARECA, EAPGREN, ECPGR, the FAO-Treaty Secretariat and Bioversity. F. Begemann and L. Maggioni, representing ECPGR, brought to the workshop the European experience regarding the regional implementation of the Treaty (National information systems, EURISCO and AEGIS). As a result, a road map for the national implementation of the Multilateral System (MLS) was drawn up, with priority assigned to the documentation of designated material, including the establishment and management of information systems. However, in practice, the ECPGR travellers received the impression that no firm commitment was taken and of apparent stagnation at the regional network level.

As a lesson learned from this workshop, before other ECPGR actions are undertaken, it will be essential to verify in advance the existence of a genuine interest of the partner network to implement the MLS as soon as possible. Provision of inter-regional support should also be linked to the possibility of obtaining factual outcomes (i.e. MLS accessions designated, national or regional inventory established, etc.).

Opportunities for future actions will need to be carefully explored together with the FAO-Treaty Secretariat and Bioversity Regional Directors.

Outlook for 2010: activities planned by the Network include the organization of a second Capacity building Inter-regional Workshop on International Treaty implementation, jointly with the Documentation and Information Network.

4. AEGIS INITIATIVE FOR “A EUROPEAN GENE BANK INTEGRATED SYSTEM”

During 2009 further steps were made with respect to the development of elements that are essential components of the AEGIS system. In addition, some other important developments took place during 2009 which are summarized below.

On 22 April 2009 the AEGIS Memorandum of Understanding (MoU) was sent to the ECPGR National Coordinators for signature by the respective country authorities. On 23 July 2009, upon signature of the tenth country eligible for membership, AEGIS entered into force. By the end of 2009 the following 17 countries had returned the signed MOU to Bioversity International, the depositary of the agreements: Albania, Azerbaijan, Bulgaria, Cyprus, Czech Republic, Estonia, Finland, Georgia, Germany, Ireland, The Netherlands, Norway, Portugal, Slovakia, Slovenia, Switzerland and the Ukraine. In addition, seven AEGIS Associate Membership Agreements between institutions holding *ex situ* accessions and the respective National Coordinators were concluded and copies sent to the Secretariat in Rome.

In September 2009, as a follow-up to the Steering Committee meeting in Sarajevo, the Secretariat, in close collaboration with Theo van Hintum (CGN, The Netherlands), finalized the discussion paper “Quality Management System for AEGIS”, AQUAS in short. The paper includes a definition of a quality management system, the principles of such a system, the operational framework including responsibilities, and the implementation steps of AQUAS.

During its Eleventh Meeting, the Steering Committee had approved the formation of a Competitive Grant Scheme, as part of the establishment phase of AEGIS. A small Task Force had assisted the Secretariat in developing the Scheme which is intended to support activities that will directly contribute to the establishment and/or operation of AEGIS. A total of € 103 000 had been set aside for this purpose during Phase VIII. The announcement on the launch of the Scheme was made on 26 June 2009, inviting ECPGR Networks, Network Coordinating Groups and Working Groups to submit proposals. A total of 17 proposals were received by the 18 October 2009 deadline, of which 14 were eligible (see the full list at: http://aegis.cgiar.org/about_aegis/latest_news/aegis_grant.html). The evaluation process was initiated under the leadership of the newly established AEGIS Advisory Committee.

In September 2009 the Steering Committee approved the Terms of Reference and the composition of the newly established AEGIS Advisory Committee. The Committee consists of Dave Astley (UK), Ladislav Dotlačil (Czech Republic), Gert Poulsen (Denmark), Anke van den Hurk (The Netherlands) and Vladimir Meglič (Slovenia) (<http://aegis.cgiar.org/structure/governance.html>).

The Secretariat staff participated in a number of ECPGR Network and Working Group meetings, as well as in some other European meetings that provided adequate fora for discussion and the creation of awareness on AEGIS. These included:

- ECPGR/FAO/Bioversity/EAPGREN Inter-regional Cooperation Workshop on International Treaty Implementation, 19-20 March 2009, Entebbe, Uganda
- SEEDNet Regional Steering Committee Meetings, 30 March-2 April 2009, St. Petersburg, Russian Federation, and 7-9 October 2009, Dubrovnik, Croatia
- EPGRIS3 meeting on the creation of protocols to facilitate the exchange of characterization and evaluation (C&E) data and to explore and improve the linkage between ECCDBs and EURISCO, 7 May 2009, Bundesanstalt für Landwirtschaft und Ernährung (BLE), Bonn, Germany

- EUCARPIA Genetic Resources Section, 26-30 May 2009, Ljubljana, Slovenia (keynote presentation on AEGIS)
- Preparatory meeting for the FP7 call for proposals on research “PGR Secure, i.e. KBBE.2010.1.1-03: “Characterization of biodiversity resources for crop wild relatives to improve crops by breeding”, 2 July 2009, organized by the University of Birmingham
- The Integration of Cryopreservation in Genebank Strategies. COST Action 871, WG2 Workshop, 10-11 September 2009, IPK, Gatersleben, Germany
- Fourth Meeting of the ECPGR Working Group on Medicinal and Aromatic Plants, 29 September-1 October 2009, Kuşadası, Turkey
- Third Meeting of the ECPGR Vegetables Network Meeting, 10-12 November 2009, Catania, Italy.

In July 2009 the Framework Programme 7 of the European Union published the “Research Infrastructures – Support to existing research infrastructures – Integrating Activities” Call which included a topic “Integrated research infrastructure for a rational *ex situ* conservation and use of European plant genetic resources for food and agriculture”. The Secretariat, Bioversity and some ECPGR member countries had worked closely with key officials to make this topic fully applicable to the establishment of AEGIS. The ECPGR Steering Committee endorsed the suggestion that the ECPGR Secretariat should coordinate the development of the proposal. On 3 December 2009 the proposal was submitted (EUROGENEBANK in short) after an intensive period of discussions and writing in which the selected Work Package leaders played a key role.

During the first (out of two) face-to-face meetings, it was decided to stick to a number of principles, i.e.:

- To place the EUROGENEBANK Project squarely within the AEGIS framework
- To include key aspects agreed upon by the ECPGR SC (i.e. “A Strategic Framework for the Implementation of a European Genebank Integrated System (AEGIS) – A Policy Guide”)
- To build on the strength and existing capacity/infrastructure
- To create the Project as an “independent” entity, but to actively manage the interface with the wider community
- To make the Project outputs available to all European genebanks (owing to the importance of capacity building).

The submitted EUROGENEBANK Project entailed the following interesting facts and figures:

- If funded, the ECPGR Secretariat would coordinate the Project implementation.
- The project involves 32 formal participating organizations (i.e. partners) in 19 countries.
- The total requested budget is € 8 683 685 with more than 1060 person/months and a duration of 4 years. The proposal includes 79 deliverables and 85 milestones.
- The Project consists of 11 Work Packages (see box below), lead by 8 different organizations.

Work Packages of EUROGENEBANK Project
WP1: Project Management (Bioversity)
WP2: Policy dissemination and communication (KIS)
WP3: European <i>ex situ</i> conservation and use knowledge base (CRI)
WP4: Creating the European Collection (Graminor)
WP5: Designing C&E procedures and infrastructure (BLE)
WP6: Capacity building (Bioversity)
WP7: Upgrading PGR information management and interfaces (CGN)
WP8: Access to European PGR Catalogue (Bioversity)
WP9: Developing operational and technical standards (MTT)
WP10: Designing the quality management system (MTT)
WP11: Supportive research to facilitate rationalization of germplasm management (INRA)

According to the instructions of the SC at its meeting in Sarajevo (2008), the following **publication**, previously printed as a "Discussion paper", was made available on the Web in a revised form and as a "Policy guide":

- ECPGR. 2009. A Strategic Framework for the Implementation of a European Genebank Integrated System (AEGIS). A Policy Guide. European Cooperative Programme for Plant Genetic Resources (ECPGR). Bioversity International, Rome, Italy.

A new dedicated **Web site for AEGIS** was developed and launched in December 2009:

<http://www.aegis.cgiar.org/>

Outlook for 2010: major activities foreseen for 2010 include the development of a template for an operational genebank manual, the development of generic operational genebank standards and support to the WGs in the drafting of minimum crop standards. Draft system(s) should be developed for recording and reporting on the implementation of AQUAS. Procedures for identifying MAAs should also be streamlined. The selected Grant Scheme 2009 projects will be implemented and a second Grant Scheme 2010 is expected to be launched at the end of 2010. The number of AEGIS members and of established Associate Membership Agreements is expected to increase and possibly the first accessions belonging to the European Collection will be designated.

5. LINKS WITH OTHER NETWORKS AND INITIATIVES

The following interactions between ECPGR and other Networks and initiatives took place during 2009:

➤ **Global Crop Diversity Trust**

2009 was the first year of activity of a two-year project funded by the Global Crop Diversity Trust for the regeneration and safety-duplication of regionally prioritized crop collections. The project, jointly prepared by the ECPGR Cereals Network and the Oil and Protein Crops Network, and submitted for funding through the ECPGR Secretariat, is aiming at carrying out regeneration and safety-duplication of over 5000 threatened accessions identified in ten European countries (Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Greece, Hungary, Israel and Portugal). The total grant is nearly US\$ 130 000 and the ECPGR Secretariat is acting as the backstopping agent for the project. As a result of the first year of activities, the 12 partner institutions involved have successfully regenerated 414 grain legume accessions (chickpea, common bean, cowpea, faba bean, grasspea and lentil) and 1522 cereal accessions (*Aegilops*, barley, maize, sorghum and wheat). All the regenerated samples are planned to be safety-duplicated both at the Svalbard Seed Vault and at a CGIAR centre or at another genebank meeting the international management standards. All germplasm regenerated under the project will be made available and otherwise dealt with in accordance with the terms and conditions of the Standard Material Transfer Agreement of the International Treaty on Plant Genetic Resources for Food and Agriculture.

➤ **SEEDNet**

Collaboration with the Sida-funded South East Europe Development Network on Plant Genetic Resources (SEEDNet) continued in 2009, with the participation of the ECPGR Coordinator in the Tenth and Eleventh Regional Steering Committee meetings in St. Petersburg, Russian Federation, 30 March-2 April 2009 and in Dubrovnik, Croatia, 7-9 October 2009. There was an exchange of information regarding ECPGR, AEGIS and EURISCO.

➤ **European Commission**

The ECPGR Networks continued their involvement in the development of a few ongoing projects: AEGRO (*in situ* management), AVEQ (*Avena* for quality in human consumption), EURALLIVEG (vegetative *Allium* core collection), LEAFY VEG (use of leafy vegetables germplasm) and GrapeGen06 (management of *Vitis* genetic resources).

Following the recommendations made by the Steering Committee at their meeting in October 2008, a Task Force was established to support further development of the ECPGR strategy for collaboration with the EU. The European Commission (Directorate-General for Health and Consumer Protection) was informally approached by the Task Force members with a proposal for

collaboration in the implementation of the Treaty. As a result, the European Commission organized an inter-service consultation, involving representatives of the relevant Directorates-General.

The communication efforts undertaken by the Secretariat and supported by Bioversity in 2009 also led to the adoption of three significant research topics on agricultural biodiversity in the Seventh Framework Programme, i.e.: “Genetic and genomic tools to increase the breeding efficiency in fruit Trees”, “Characterisation of biodiversity resources for wild crop relatives to improve crops by breeding” and the call for proposals on the “Strengthening of the European research infrastructure for the conservation and use of PGRFA”, for which the AEGIS proposal (EUROGENEBANK) was submitted in December 2009. The European Commission sought and received technical advice from the Secretariat in preparation of these calls.

➤ **The International Treaty on PGRFA**

The capacity building inter-regional workshop organized in March 2009 in Entebbe, Uganda (see above, Section 4.9) was the result of collaboration with the Treaty Secretariat.

Following approval by the Steering Committee in September 2008 of a mechanism of registration of accessions in the Multilateral system (MLS) and the introduction of a descriptor field in EURISCO regarding MLS status of each accession, over 212 000 accessions had been registered as part of the MLS by 13 countries at the end of 2009.

The opportunity was sought to establish a Memorandum of Understanding between ECPGR and the Treaty Secretariat, so that the support of ECPGR to the implementation of the ITPGRFA could be acknowledged and formalized. The financial support that ECPGR was prepared to invest for the organization of inter-regional workshops amounted to about € 56 000 (including the funds allocated by the Documentation and Information Network, the Inter-regional Cooperation Network and targeted funds offered by Germany). However, at the end of 2009, a formal agreement of this type had not yet been concluded.

➤ **EUCARPIA**

The ECPGR Secretariat participated in the 19th EUCARPIA Genetic Resources Section Meeting, Ljubljana, Slovenia, 26–30 May 2009, offering an invited presentation on AEGIS and presenting a poster on EURISCO. Participation of ECPGR in the EUCARPIA meeting has allowed the breeders to be informed on the ECPGR activities, although it has not so far led to any concrete joint initiatives or strengthened collaborations in a visible way.

6. ECPGR EXTERNAL REVIEW

Preparations for the ECPGR Independent External Review continued in 2009 with the definition of the Terms of Reference (agreed by the Steering Committee in May 2009). A Bioversity Internal Review Team (Jan Engels, Lidwina Koop, Lorenzo Maggioni, Patti Sands and Jozef Turok) was established to closely coordinate the preparations for the external review of the Steering Committee-established Review Task Force (Jens Weibull, Sweden – Chair; Gordana Popsimonova, Macedonia FYR; Bert Visser, The Netherlands; Zofia Bulinska, Poland; Silvia Strajeru, Romania; Geert Kleijer, Switzerland; and Mike Ambrose, United Kingdom). Three candidates were also selected and approved by the Steering Committee as panel members. The three following candidates accepted to carry out the review in 2010:

- **Marianne Lefort**, France – currently Director of Research AgroParisTech, she has been former Director of the Bureau des Ressources Génétiques and French ECPGR National Coordinator.
- **Orlando De Ponti**, The Netherlands – current President of the International Seed Federation, he has been former Director of Research at Nunhems Seeds, vegetables breeding company, and former Chair of the Biodiversity Commission of the Dutch breeding sector organization.
- **Thomas Gass**, Switzerland (proposed Chair of the panel) – currently Swiss Ambassador in Nepal, he has been former ECPGR Coordinator and Director of the Regional Office for Europe at IPGRI, after which he worked as programme officer for employment and income generation in rural areas for the Swiss Agency for Development Cooperation (SDC) and for UNDP as Deputy Resident Representative.

In order to cover the costs of the review, over € 33 000 were raised as voluntary contributions paid by Switzerland (€ 10 000), UK (€ 1000), Finland (€ 750) and pledged by the Nordic Countries (DKK 160 000).

7. PUBLICATIONS

7.1. Publications produced in 2009

The following publications were produced in 2009 and can be obtained free of charge from the Secretariat. The ECPGR publications are also available in electronic format through the ECPGR Web site (<http://www.ecpgr.cgiar.org/Publications/Publications.htm>).

- **ECPGR printed publications (also available online)**
 - Report of a Working Group on *Beta* and the World *Beta* Network. Third Joint Meeting, 8-11 March 2006, Puerto de la Cruz, Tenerife, Spain.
 - Report of a Working Group on Medicinal and Aromatic Plants. Second Meeting, 16-18 December 2004, Strumica, Macedonia FYR / Third Meeting, 26-28 June 2007, Olomouc, Czech Republic.
 - European landraces: on-farm conservation, management and use. Bioersity Technical Bulletin no. 15.
 - Crop genetic resources in European home gardens. Proceedings of a Workshop, 3-4 October 2007, Ljubljana, Slovenia.
- **ECPGR electronic documents**
 - A Strategic Framework for the Implementation of a European Genebank Integrated System (AEGIS) – A Policy Guide.
 - Report of a Vegetables Network. Second Meeting. 26-28 June 2007, Olomouc, Czech Republic.
 - Report of a Task Force on On-farm Conservation and Management. Third Meeting, 2-3 October 2007, Ljubljana, Slovenia.
 - Report of a Network Coordinating Group on Forages. *Ad hoc* Meeting, 11 May 2009, La Rochelle, France.
 - Report of a Cereals Network. Second Meeting, 21-24 April 2008, Foça, Turkey (draft published February 2009).
 - Report of a Working Group on Grain Legumes. Fourth Meeting, 16-17 November 2007, Lisbon, Portugal (draft published March 2009).
 - Report of a Working Group on Medicinal and Aromatic Plants. Fourth Meeting, 29 September - October 2009, Kuşadası, Turkey (draft published December 2009).
 - ECPGR Annual report 2008.
 - ECPGR Financial report 2008.
- **Bioersity publications**
 - Issues 38 and 39 of Bioersity's **Regional Newsletter for Europe** were also published in 2009 with contributions and partial financial support from ECPGR.

7.2. Publications in preparation in 2009

- **ECPGR electronic documents**
 - Report of a Working Group on Forages. Ninth Meeting, 23-25 October 2007 Piest'any, Slovakia.
 - Report of a Working Group on Grain Legumes. Fourth Meeting, 16-17 November 2007, Lisbon, Portugal.
 - Report of the Network Coordinating Group on Sugar, Starch and Fibre Crops. Third Meeting, 8-9 October 2009, Quedlinburg, Germany.
 - Report of a Working Group on Fibre Crops (Flax and Hemp). First Meeting, 14-16 June 2006, Wageningen, The Netherlands.
 - Report of a Working Group on *Malus/Pyrus*. Third Meeting, 25-27 October 2006, Tbilisi, Georgia.
 - Report of a Vegetables Network. Third Meeting, 10-12 November 2009, Catania, Italy.

- Report of a Working Group on Medicinal and Aromatic Plants. Fourth Meeting, 29 September-1 October 2009, Kuşadası, Turkey.
- Report of a Working Group on Cucurbits. Ad hoc Meeting, 23-24 October 2008, Warsaw, Poland.
- Report of a Cereals Network. Second Meeting, 21-24 April 2008, Foça, Turkey.

8. ECPGR MEETINGS HELD IN 2009

- ASARECA, EAPGREN, ECPGR, FAO-Treaty Secretariat and Bioversity International Inter-regional Cooperation Workshop for Capacity building on the Implementation of the International Treaty, 18-21 March 2009, Entebbe, Uganda.
- EPGRIS3 Workshop on characterization and evaluation data and the link between EURISCO and the ECPGR Central Crop Databases, 7 May 2009, Bonn, Germany.
- Ad hoc Meeting of the Forages Network Coordinating Group, 11 May 2009, La Rochelle, France.
- Training workshop of the EURISCO National Inventory Focal Points, 29-30 June 2009, Prague, Czech Republic.
- Fourth Meeting of the Medicinal and Aromatic Plants (MAPs) Working Group, 29 September-1 October 2009, Kuşadası, Turkey.
- Third Meeting of the Sugar, Starch and Fibre Crops Network Coordinating Group, 8-9 October 2009, Quedlinburg, Germany.
- Third Meeting of the Vegetables Network, 10-12 November 2009, Catania, Italy.
- Pre-breeding workshop on cereals, 24-25 November 2009, Alnarp, Sweden.

9. COORDINATING SECRETARIAT AND BIODIVERSITY INTERNATIONAL

The following staff members have worked as part of the ECPGR Secretariat at Bioversity (ECPGR personnel budget): Aixa Del Greco (until April 2009, as half-time Scientific Assistant involved (*inter alia*) in support to the Networks, revision of descriptors, Web development/implementation, public awareness); Jan Engels (as half-time AEGIS Coordinator); Lidwina Koop (as 75% ECPGR Programme Assistant); Elinor Lipman (as half-time Scientific Assistant, based in Montpellier, France, involved in the compilation and layout of ECPGR publications and general support to the Secretariat activities); Lorenzo Maggioni (ECPGR Coordinator).

The scientific and technical contributions, as well as management and administrative support provided by Bioversity International and its staff to the work of ECPGR is also acknowledged. In particular, Bioversity provided funding for the half-time EURISCO Coordinator (Sónia Dias) and documentation-related activities in Europe, as well as technical inputs to the maintenance and development of EURISCO. Several colleagues participated and actively contributed as members of the Local AEGIS Task Force (Ehsan Dulloo, Jan Engels, Lorenzo Maggioni, Gerald Moore and Jozef Turok), as well as members of the Local ECPGR Support Team dealing with the external review of ECPGR (see above, Chapter 6). Bioversity Policy Unit was supportive regarding the policy and legal aspects of AEGIS.

★★★

Lorenzo Maggioni
ECPGR Coordinator

(with inputs from Sónia Dias, Jan Engels, Elinor Lipman, Olga Spellman, Jozef Turok and from the ECPGR Network Coordinating Groups)

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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