Report of the ECP/GR Network Coordinating Groups

First Meeting, 29-31 March 2006, Bonn, Germany

L. Maggioni and E. Lipman, *compilers*

The International Plant Genetic Resources Institute (IPGRI) is an independent international scientific organization that seeks to improve the well-being of present and future generations of people by enhancing conservation and the deployment of agricultural biodiversity on farms and in forests. It is one of 15 Future Harvest Centres supported by the Consultative Group on International Agricultural Research (CGIAR), an association of public and private members who support efforts to mobilize cutting-edge science to reduce hunger and poverty, improve human nutrition and health, and protect the environment. IPGRI has its headquarters in Maccarese, near Rome, Italy, with offices in more than 20 other countries worldwide. The Institute operates through four programmes: Diversity for Livelihoods, Understanding and Managing Biodiversity, Global Partnerships, and Improving Livelihoods in Commodity-based Systems.

The international status of IPGRI is conferred under an Establishment Agreement which, by January 2006, had been signed by the Governments of Algeria, Australia, Belgium, Benin, Bolivia, Brazil, Burkina Faso, Cameroon, Chile, China, Congo, Costa Rica, Côte d'Ivoire, Cyprus, Czech Republic, Denmark, Ecuador, Egypt, Greece, Guinea, Hungary, India, Indonesia, Iran, Israel, Italy, Jordan, Kenya, Malaysia, Mali, Mauritania, Morocco, Norway, Pakistan, Panama, Peru, Poland, Portugal, Romania, Russia, Senegal, Slovakia, Sudan, Switzerland, Syria, Tunisia, Turkey, Uganda and Ukraine.

Financial support for IPGRI's research is provided by more than 150 donors, including governments, private foundations and international organizations. For details of donors and research activities please see IPGRI's Annual Reports, which are available in printed form on request from ipgri-publications@cgiar.org or from IPGRI's Web site (www.ipgri.cgiar.org).

The European Cooperative Programme for Crop Genetic Resources Networks (ECP/GR) is a collaborative programme among most European countries aimed at facilitating the long-term conservation and the increased utilization of plant genetic resources in Europe. The Programme, which is entirely financed by the member countries and is coordinated by IPGRI, is overseen by a Steering Committee composed of National Coordinators nominated by the participating countries and a number of relevant international bodies. The Programme operates through nine networks in which activities are carried out through a number of permanent working groups or through *ad hoc* actions. The ECP/GR networks deal with either groups of crops (cereals; forages; fruit; oil and protein crops; sugar, starch and fibre crops; vegetables, medicinal and aromatic plants) or general themes related to plant genetic resources (documentation and information; *in situ* and on-farm conservation; inter-regional cooperation). Members of the working groups and other scientists from participating countries carry out an agreed workplan with their own resources as inputs in kind to the Programme.

Citation:
Maggioni, L. and E. Lipman, compilers. 2006. Report of the ECP/GR Network Coordinating Groups. First Meeting, 29-31 March 2006, Bonn, Germany. International Plant Genetic Resources Institute, Rome, Italy.

ISBN-13: 978-92-9043-739-0
ISBN-10: 92-9043-739-1

IPGRI
Via dei Tre Denari 472/a
00057 Maccarese
Rome, Italy

CONTENTS

PART I. PLENARY SESSIONS

Introduction

The European Cooperative Programme for Plant Genetic Resources Networks (ECP/GR) is structured into six crop-specific networks (Cereals; Fruit; Forages; Oil and Protein Crops; Sugar, Starch and Fibre Crops; Vegetables and Medicinal and Aromatic Plants), and three thematic networks (Documentation and Information; Inter-regional Cooperation; *In situ* and On-farm Conservation).

Each Network is guided by a Network Coordinating Group (NCG) composed of the Working Group or Task Force leaders plus a number of other co-opted Network members.

This meeting of the NCGs' members was scheduled by the ECP/GR Steering Committee as part of the activities of ECP/GR in its Phase VII (2004-2008); it is the only regular meeting planned in order to facilitate fulfilment of the NCGs' responsibilities and delivery of the requested outputs, and is therefore an important step in the preparation of the upcoming Mid-Term Meeting of the ECP/GR Steering Committee, to be held in September 2006.

The meeting was attended by a total of 47 participants (37 NCG members, 4 observers and 6 IPGRI staff). The only Network which was not represented at this meeting was the Oil and Protein Crops.[1]

Welcome from local host

Frank Begemann, Head of the Information and Coordination Centre for Biological Diversity, (IBV), who also spoke on behalf of the President of the Federal Agency for Agriculture and Food (Bundesanstalt für Landwirtschaft und Ernährung, BLE), welcomed the participants to the Meeting of the ECP/GR Network Coordinating Groups. He explained that IBV is now a Division of the BLE. The move to its new premises took place on 1 December 2005. He then described the structure of the BLE, the largest agency in the Federal Ministry of Food, Agriculture and Consumer Protection (Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, BMELV), giving a brief historical review of the development and reorganization of the German institutes leading to the creation of the BLE in 1995.

BLE's tasks were primarily focused on market intervention and import/export. They have been extended to cover new fields of activities: acting as the executive agency for BMELV project funding; dealing with new areas, such as rural development, organic farming, food quality and consumer needs, agricultural statistics/monitoring (i.e. participation in international monitoring/control of fish), and most recently (1 Dec. 2005) agrobiodiversity.

BLE has several other offices scattered in Germany.

After this introduction and before proceeding with the meeting, F. Begemann wished to share with the participants the sad news he had just received from Vladimir Pekić (former ECP/GR National Coordinator for Serbia and Montenegro), informing the gathering of the untimely death of Dražen Jelovac, of the Maize Research Institute in Zemun Polje. Among his many roles and responsibilities, Dražen was the manager of the European Maize Central Crop Database since its inception. He also was the SEEDNet representative in the ECP/GR Information and Documentation Network and participated in many ECP/GR, SEEDNet and national activities over the past two decades.

---

[1] The Oil and Protein Crops Network NCG met in Paris on 16-17 May 2006 and provided a detailed report which is included as Appendix I.

Ken Tobutt, Chair of the morning session, presented the agenda of the meeting (see Appendix IV).

The participants introduced themselves briefly, indicating to which NCG they belonged and their role (e.g. Chair of a Working Group, database manager, etc.) (see List of participants, Appendix V).

Jozef Turok (IPGRI) and Barbara Weber (BMELV) were attending, both as observers, for the first morning session only.

Briefing on ECP/GR Phase VII

Lorenzo Maggioni introduced the main changes which have been made to the structure and mode of operation of the ECP/GR programme since it entered its VIIth Phase (2004–2008), following the decisions made by the Steering Committee in its last meeting in Izmir, Turkey, October 2003.[2]

These changes have resulted in a new structure, reduced to nine Networks, with a reinforced coordinating role of the Network Coordinating Groups within each Network. Three new Working Groups were established (Cucurbits, Fibre Crops (Flax and Hemp) and Leafy Vegetables), bringing the total number of Working Groups up to 18. Twelve of these were given high priority during this Phase and were recommended to focus their activities on priority areas: 1) Characterization and evaluation; 2) Task sharing; 3) *In situ* and on-farm conservation; and 4) Documentation. For the first time Networks' budgets were assigned to each Network and the responsibility for defining how to spend these funds was given to the NCGs. This meeting is an occasion for the NCGs to review progress made at the mid-term of Phase VII and to readjust their workplans and budgets. A number of documents prepared by the Secretariat in support of the Networks' activities and to explain the mode of operation of ECP/GR were highlighted. These are available from the ECP/GR Web site (http://www.ecpgr.cgiar.org) and include the Terms of Reference for the ECP/GR operational bodies, the Networks' budget allocation for Phase VII, the Working Group standardized reporting format and the guidelines for the mechanism of participation in ECP/GR meetings on the basis of the "Country quota" system.

Changes in the operating environment

The International Treaty on Plant Genetic Resources for Food and Agriculture

Jan Engels and Lorenzo Maggioni, IPGRI

Background to the International Treaty

The International Undertaking on plant genetic resources (PGR), established in 1983, is the predecessor of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). The Undertaking was a legally non-binding agreement, based on the principle that PGR are a "heritage of mankind" and consequently should be available without restriction, and it addressed both plant breeders' rights and farmers' rights.

The Convention on Biological Diversity (CBD) entered into force in December 1993. It recognized the sovereign rights of States over biodiversity within their borders; its Contracting Parties are bound by the Convention to create conditions to facilitate access to

[2] See Report of the Ninth Steering Committee Meeting, also available on Internet at http://www.ecpgr.cgiar.org/SteeringCommittee/SC9.htm

genetic resources; and the access is on mutually agreed terms and subject to Prior Informed Consent (i.e. it favours bilateral rather than multilateral agreements).

Rationale for the ITPGRFA

Outstanding issues on plant genetic resources for food and agriculture (PGRFA) that were not addressed within the CBD were assigned to FAO as part of Resolution 3 of the Nairobi Final Act, i.e. the CBD covers only genetic resources provided by Contracting Parties that are the countries of origin of such resources or that acquired such resources in accordance with the Convention; the CBD did not address the legal status of *ex situ* material collected before entrance into force of the CBD, including the germplasm collections maintained by the CGIAR; or the questions on Farmers' Rights.

Rationale for special treatment of PGRFA

Special treatment is necessary for PGRFA due to their special nature, compared to wild species, to take account of the peculiarities of crop improvement and the breeding process. Important considerations are: the fact that PGRFA diversity is predominantly man-made with a strong dependency on continued human management; the importance of intra-specific diversity for the crop improvement and evolutionary processes; they are frequently the products of improvement work over many generations; and it is usually hard to define the "origin" of products and that of their several distinctive properties. Other important considerations are: the interdependency of countries on PGRFA; no country is (entirely) self-sufficient in terms of PGRFA; the importance of PGRFA for food security and to ensure that crops continue to be able to feed the world, including both health and nutrition considerations; and that for this purpose access to a wide range of PGRFA and related information is essential.

Special access needs to PGRFA

If the access were only to be possible through bilateral agreements, for instance in the case of rice at IRRI (International Rice Research Institute), with more than 85 000 accessions and germplasm that originated from 111 countries, it would require that any given country would have to negotiate a minimum of 110 contractual agreements to get access to "total" diversity; and for all countries to get access to all the material it would require a minimum of 12 210 agreements! Clearly this would lead to high transaction costs and developing countries that are "poor" in genetic resources would find themselves with very low negotiating power when trying to establish exchange agreements.

Current status of the Treaty

The Treaty was negotiated by 164 members of the FAO Commission on Genetic Resources for Food and Agriculture over a period of almost eight years. The Treaty was adopted by the FAO Conference by consensus in November 2001 and it entered into force on 29 June 2004, 90 days after it was ratified by 40 states. At present, i.e. end of March 2006, 95 States and the European Commission are Parties.

Objectives and the major components of the Treaty

The conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of benefits arising from their use, in harmony with the CBD, together with its contributions to sustainable agriculture and food security are the main objectives. The Treaty is closely linked to FAO and CBD in attaining its objectives.

One of the main achievements of the Treaty is the establishment of a Multilateral System of Access and Benefit-sharing (MLS). The principles of the MLS are:

1. The recognition of the sovereign rights of states over their own PGRFA;
2. That the authority to determine access to the PGRFA rests with governments and is subject to national legislation; and
3. In exercising this sovereign right, the contracting parties agreed to establish the MLS.

The list of 35 crops/genepools and 34 forages species/genera, included in Annex I of the Treaty, define the scope for the MLS. These species or genera were selected on the basis of their importance for food security and country interdependency; "only" PGRFA that are under "*the management and control of the Contracting Parties and in the public domain*" will form part of the MLS; the Contracting Parties invite other holders of Annex I PGRFA (e.g. private sector) to include such material in the MLS; a multilateral agreement on rules regarding facilitated access and benefit-sharing will have to be established; and the MLS also includes genetic resources that are held by the CGIAR and other international institutions.

Facilitated access to PGRFA within the MLS

Important aspects of the access to PGRFA that are part of the MLS include:

- The material being accessed is solely for purpose of utilization and conservation for research, breeding and training for food and agriculture;
- Access shall be expeditious, without need for tracking and free of charge;
- Access includes all available passport data and other associated non-confidential information;
- Recipients shall not claim any "*Intellectual property or other rights that limit facilitated access to the plant genetic resources for food and agriculture, or their genetic parts and components, in the form received from the MLS*";
- Access to PGRFA under development, including by farmers, is at the discretion of the developer during the period of its development;
- Access to material with intellectual property protection shall be consistent with relevant international agreements and with relevant national legislation;
- Materials accessed under the MLS and conserved shall continue to be made available under agreed terms by the recipients of those PGRs;
- Access to *in situ* material is granted according to national legislation; and
- Facilitated access to PGRFA is pursuant to a standard Material Transfer Agreement.

Benefit sharing within MLS

As genetic resources that form part of the MLS are "pooled", there is no need to negotiate access and benefit-sharing contracts with individual owners. Therefore, the transaction costs will be low and this will benefit the users, that is farmers, plant breeders and researchers, and ultimately also consumers. The benefits arising from the use of the MLS material must be shared in a pooled and multilateral way and it should be noted that facilitated access to genetic resources and information itself is a major benefit.

Non-monetary benefits that arise from the use, including commercial use, shall be shared fairly and equitably through the following mechanisms: a) exchange of information (on material, from research and utilization, on technologies); b) access to and transfer of technology, improved varieties and genetic material; assistance in using technologies; favourable access conditions on Intellectual Property-protected technologies; and c) capacity-building, including education, facilities and research.

The sharing of monetary and other benefits of commercialization is based on the following principles: the involvement of the public and private sectors in collaborative research and technology development activities; if a product that incorporates material from the MLS is commercialized and its availability is restricted to others for further research and

breeding, payment of an equitable share of the benefits is due on the basis of a financial mechanism; if a product is available without restriction to others, payment is voluntary; and benefits should flow primarily to farmers in all countries, especially in developing countries, and countries with economies in transition.

Standard Material Transfer Agreement (sMTA)

In order to achieve the aforementioned access and benefit-sharing arrangements it will be indispensable to develop a sMTA as this is at the heart of the MLS. The sMTA will make the conditions of the MLS operational and it will operate at the level of private commercial law (see below, "Update on the sMTA negotiation process" by F. Begemann).

In the remainder of the presentation, other key provisions of the Treaty such as the Farmers' Rights concept as well as the Supporting Components such as the Global Plan of Action for the Conservation and Sustainable Use of PGRFA (GPA), the agreements with the International Agricultural Centers regarding *ex situ* collections (about 600 000 accessions), the International Plant Genetic Resources Networks as well as the Global Information System were briefly described. Finally, the financial and institutional provisions of the Treaty were discussed and a schedule of forthcoming important meetings was presented.

Discussion

Following a request to elaborate on what benefits would be returning to farmers, J. Engels explained that this is an objective of the Treaty; however the implementation is delegated to the individual countries.

B. Visser specified that the funding strategy of the International Treaty should contain plans for how the funds generated by the Multilateral System (MLS) would be spent and that they should eventually return to farmers in developing countries.

Update on the standard Material Transfer Agreement negotiation process

F. Begemann gave an update on the standard Material Transfer Agreement (sMTA) negotiation process. He explained that the final agreement is expected to be adopted at the first meeting of the Governing Body of the International Treaty meeting to be held in June 2006 in Madrid, Spain. The adoption of this document, together with the adoption of a Treaty funding strategy and of rules of procedure, will allow the Treaty to become operational. Currently there is an agreed structure for the text of the sMTA and a preparatory meeting of the Contact Group is scheduled for April 2006 in Alnarp, Sweden, with the objective of finalizing the draft text of the sMTA.

The sMTA will be applicable to all transactions related to Annex I crops of the ITPGRFA (approximately 60 crops), covering accessions under the management and control of the States and in the public domain. It will not be a contract between States but a private contract between the two signatories of this contract. One of the main issues that still needs to be clarified is the benefit-sharing resulting from ITPGRFA, Art. 13.2d(ii). The Treaty establishes that a recipient who commercializes a product that is a PGRFA and that incorporates material accessed from the Multilateral System (MLS) shall pay to the MLS an equitable share of the benefits arising from commercialization of that product, except whenever such a product is available without restriction to others for further research and breeding. However, a clarification is needed on the actual and practical meaning of some of the words in the text, such as: *"to commercialize"*, *"product"*, *"to incorporate"* and *"available without restriction"*. The European region has reached a common position on some of these points. For example, it is

considered that UPOV varieties should not trigger obligatory payments, since they are available without restriction for research and breeding.

Once the final sMTA has been endorsed by the Governing Body of the Treaty, the use of the sMTA will be obligatory for all the PGR material under the Multilateral System, as designated by the member countries. A voluntary use of the sMTA for pre-CBD, pre-IT and non-Annex I crops will also be possible. It will be important that Member States clarify under which regime the different parts of their collections will be accessible.

In the case of Germany, where the germplasm collections are not under the control of the federal government, letters will be sent to the public genebanks, as well as to the private collections, inviting them to place their germplasm within the Multilateral System.

EURISCO – A window on Europe's plant genetic diversity

Sónia Dias and Samy Gaiji, IPGRI

S. Dias presented an overview of the EURISCO activities undertaken from the beginning of 2005 up to the present, with reflections on future needs and developments in order to meet the various commitments, both at national and international levels.

The EURISCO catalogue (http://eurisco.ecpgr.org) currently records data on almost one million accessions maintained *ex situ* from 29 National Inventories (NIs) representing 33 European countries.

During this developmental phase, several actions have been implemented, covering areas such as: monitoring surveys both on the catalogue and on the NIs; implementation of new download capabilities; improvements in data availability and quality in the catalogue, and increase of the uploads of updated data; monitoring visitors and users; public awareness actions resulting in several articles in the IPGRI Newsletter for Europe, fact sheets, posters, and several presentations made at international fora; the EURISCO model was also presented in the Latin American region, and its deployment as AMERISCO is an ongoing process. Other possibilities are also being sought to present and deploy the EURISCO model to other regions.

The data flow model is very simple and straightforward. The National Focal Point (NFP) gathers the data at the national level for the NI. Data are then sent to EURISCO through the automatic upload mechanism. NFPs have the entire responsibility for the quantity and quality of passport data they make available. The characterization and evaluation data are channelled through the European Central Crop Databases (ECCDBs) of the ECP/GR. In order to guarantee a better data flow and its completeness at all levels, the ECP/GR Working Groups' members are encouraged to certify that national data are channelled to EURISCO and they are also encouraged to contact their respective National Focal Points and collaborate for data gathering from all available germplasm collections within the country.

In the context of the CGIAR-funded Generation Challenge Programme, tests are under way with SINGER (System-wide Information Network for Genetic Resources) data using the BioCASE software; this is one of the examples and opportunities for EURISCO to benefit from ongoing developments in the area of information technology.

The international role of EURISCO is to be an essential actor in the implementation of the Global Information System and in particular in the context of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).

In the future, it will be important to continue the support for international commitments (CBD, ITPGRFA, GPA, SEBI2010) and Network commitments (contributing to the Documentation and Information Network, National Inventories, European Central Crop Databases, AEGIS; activities carried out at regional level, inter-regional level, etc.).

Future steps considered also include: improvement of data quality and availability; refinement of taxonomic nomenclature/references; new search/download possibilities; raising awareness about the importance of PGR and associated information; increase of standards' harmonization; and linking to other information sources through Web services.

To further improve the Catalogue it will be necessary to: identify ECCDBs that need support in the documentation and information area; identify ways to improve the recognition of EURISCO as the European Catalogue for European NIs; support the strengthening of the ECCDBs and NFPs complementary roles; seek funding opportunities for future actions; invest in public awareness on the role and function of EURISCO; consider linkages to other communities (e.g. botanical inventories); meet the commitment on inter-regional deployment of the EURISCO model.

The European Seed Association

Gisbert Kley, representing the European Seed Association (ESA) (www.euroseeds.org), said that the new ESA was founded in the year 2000, as a central agency regrouping seed industry companies and their professional associations in the EU and European Economic Area.

The mission of the ESA is to coordinate and facilitate any type of scientific research on all aspects important for the seed chain, as well as to devote its energy to the development and protection of the seed sector, in particular with regard to the protection of intellectual property, plant breeding and seed production.

The association will also be used to keep up with the increasing pace of legislative developments at the EU as well as at the international level. Research in the pre-competitive stage is promoted, currently in cooperation with the EU variety office in Angers, France and the UPOV office in Geneva, Switzerland. The main PGR activities are currently devoted to sMTA negotiations. ESA considers it very important that the sMTA results in a simple and easy-to-handle document. Although public opinion believes that plant breeding is in the hands of big companies, this is only a partial picture, since small and medium-size companies are also very active and they need facilitated access to PGR. G. Kley concluded by saying that plant breeders are interested in all the progress achieved by ECP/GR and that their main need is easily accessible information on characterized genotypes.

Discussion

In reply to a question on whether breeders will consider the possibility of designating germplasm to the MLS, G. Kley said that the working collections of the breeding companies are generally made up of germplasm that had been selected and partially improved and that this is considered to be covered by trade secrecy. Therefore, breeders will be very reluctant to include any of their germplasm in the MLS. However, it was specified that UPOV varieties can be considered a contribution made by the breeders, since these are freely available for research.

It was then asked whether breeders could make sure that UPOV varieties, once withdrawn from the official lists, will be formally maintained by the breeders and made available for use. G. Kley replied that varieties which had been withdrawn are often requested by organic farmers for multiplication and trade, but this is not an acceptable use, since withdrawn varieties should not re-enter in the market.

Global Crop Diversity Trust: a Foundation for Food Security – Development of Conservation Strategies

B. Laliberté, Global Crop Diversity Trust

Introduction to the Trust

The Global Crop Diversity Trust (referred to below as the Trust) is an independent fund established under international law on 21 October 2004. It is a public-private partnership and a joint initiative of FAO and IPGRI acting for the Future Harvest Centres of the CGIAR, the goal of which is to support an efficient and effective approach to the conservation of key crop diversity collections over the long term. It has at its centre an endowment fund with an initial target US$ 260 million, generating approximately US$ 12 million per year for conservation, in perpetuity. The Trust is an essential element of the funding strategy of the International Treaty on PGRFA, and its technical framework is provided by the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture (GPA).

Essential conservation activities

The Trust will support conservation activities, defined as activities essential to maintain and make available an existing collection over the long term such as:

- Storage and maintenance (seed, *in vitro*, field)
- Safety-duplication
- Regeneration
- Characterization
- Documentation
- Health of germplasm
- Distribution/links to users

Eligibility principles and criteria

A first filter for eligibility is provided by the eligibility principles of the Trust. Meeting these principles is the minimum requirement for a collection to be eligible for support:

1. PGR included in Annex I or referred to in Article 15.1(b) of the International Treaty
2. PGR accessible under internationally agreed terms of access and benefit sharing provided for in the multilateral system as set out in the International Treaty
3. Each holder of PGRFA commits to its long-term conservation and availability
4. Each recipient of funds from the Trust shall undertake to work in partnership with the aim of developing an efficient and effective regional and global conservation system

The Trust has foreseen an interim agreement (referred to the Solemn Undertaking for Access) until the recipient country becomes a contracting Party to the International Treaty. This interim agreement should be signed by Official Level (Minister/Government Officer) responsible for PGR, confirming no legal obstacles to the recipient institute fulfilling its undertaking, to ensure that the material will be made available for the purpose of utilization and conservation for research, breeding or training in accordance with the terms and conditions set out in Part IV of the International Treaty.

To further define these broad principles, the Trust has developed a set of criteria to be met before a collection will be considered for long-term conservation support. In cases where a collection meets the eligibility principles but is unable to meet all of the eligibility criteria, the Trust will consider providing support for the upgrading and capacity building needed to

enable the collection to meet the criteria. In either case the Trust may provide financial support directly to the holder of the collection in question and/or to third party institutions for the provision of specific conservation services.

These criteria, and the way in which they are applied, will be kept under review and revised as needed, based on experience. It is proposed that, at least initially, there will be six criteria as follows:

1. Links to users: the managers of the crop diversity demonstrate strong links to farmers, breeders, researchers and other users;
2. Importance of the collection: value, uniqueness, range of diversity within the collection and in the wider genepool both *ex situ* and *in situ*; the collection is to some extent threatened;
3. Legal status of collection and holder: recognized by country's authority and able to meet eligibility principles of access and benefit-sharing and commitment to long-term conservation;
4. Willingness to collaborate: to act in partnership to achieve a rational system of conservation and intent to share facilities, resources and information;
5. Proven capacity for germplasm conservation and management:
    - human resources and management systems to maintain crop diversity,
    - adequate qualified staff,
    - procedures in place for genebank management,
    - proper documentation system,
    - germplasm health,
    - distribution, etc.
6. Status of storage facilities: facilities are adequate to ensure long-term conservation and conform to agreed scientific and technical standards of management.

Counterpart contribution

It is clear that the Trust will only ever be able to make a partial contribution to the total cost of conserving the world's genetic resources for food and agriculture. Grant recipients are also required to contribute financial or other resources to the costs of conserving the collections they hold. Such a counterpart contribution provides a means for recipients to demonstrate their own commitment to long-term conservation – a basic principle of eligibility for support from the Trust.

Conservation strategies

The Global Crop Diversity Trust will support the development, through a series of consultations and studies, of a set of conservation strategies that will guide the allocation of resources to the most important and needy crop diversity collections. The conservation strategies will identify the collections that will be of highest priority for support by the Trust and the appropriate roles for the holders of priority collections as well as for other individuals and institutions concerned with the conservation, regeneration, documentation and distribution of crop diversity.

The Trust supports two complementary and mutually reinforcing approaches to identifying and prioritizing eligible collections for upgrading and long-term conservation funding. One approach is to identify key *ex situ* collections of globally important crops[3] on a region-by-region basis. The other is to prioritize collections on a crop-by-crop basis at the

[3] These are identified as those crops appearing on Annex I or in Article 15 of the International Treaty.

global level. Both approaches will lead to the definition of strategies for rationalizing conservation.

This process will bring together the managers of plant genetic resources and other experts from developing and developed countries to develop and implement the most cost-efficient and effective strategies for ensuring the long-term conservation and availability of the crops that are vital to the world's food security. Such strategies will not only involve the holders of the plant genetic resources, but also other institutions and individuals that can contribute to the conservation of priority crop diversity collections. The process is facilitated by experts and consists of gathering existing information on holdings, supplemented with inventories, as needed. The stakeholders will be consulted through surveys and consultation meetings. The Trust Secretariat, IPGRI and CGIAR Centres and FAO are providing backup.

Regional conservation strategies

The regional conservation strategies aim at identifying key collections of important Annex I crops identified on a region-by-region basis. They will consist of a collective analysis by holders and experts of needs and the development of models for rationalization and cost-effective conservation at regional level. They will facilitate the identification of regional priorities, identify needs for upgrade and capacity, and fund several collections in a single genebank. The following regional strategies are currently under way and all will be completed by mid-2006:

- Americas
- Asia (South, Southeast and East Asia)
- Pacific
- Central Asia and the Caucasus
- Eastern Africa
- Southern Africa
- West and Central Africa
- West Asia and North Africa

Global crop conservation strategies

The crop strategies will identify critically important collections on a crop-by-crop basis, and assign priority ranking to them for support by the Trust. They will also identify any gaps in the regional strategies with regard to important plant diversity collections, ensuring that they receive support to deal with the gaps. The approach to developing crop strategies is based on the same philosophy as the regional approach, i.e. it will be largely driven by experts and holders of genetic resources of the crop in question. The process will begin with a preliminary period of research into the state of diversity in the collections of that crop by an expert consultant, with assistance from IPGRI and FAO. Additional experts will then be consulted, as needed, to assist in the prioritization of collections and service providers for funding. In many cases, existing crop networks will be able to mobilize for this purpose; in others, a group of national and international crop experts may need to come together on one or more occasions. They will identify collections to receive conservation support over the long term. The crop strategies currently initiated are for: banana, barley, chickpea, coconut, grass pea, lentil, maize, oats, pigeon pea, potato, rye, rice, sorghum, strawberry, triticale and wheat. The next strategies to be initiated in mid-2006 will be for: beans, cowpea, faba bean, pea and sunflower. All Annex I crop strategies to be initiated and/or completed by end of 2007.

The CGIAR Centers are major players in both regional and crop strategy development and their role is mainly in providing background information on crop collections and conservation standards, participating in the stakeholder process to define a rational

conservation approach and technical backstopping to Trust grantees. They will also be beneficiaries of long-term funding.

The main steps for the development of the crop conservation strategies are the following:

- Agree on coordination, facilitation and process for developing the conservation strategy;
- Compile existing information on crop collections and fill gaps through surveys;
- Consultations with Crop and Regional Networks – feedback on some key questions such as:
  - *Which collections are "most important" (size, extent/scope of diversity, wild relatives and other measurements as defined by partners)?*
  - *Which collections meet the Trust's eligibility principles?*
  - *Are funds required to manage these collections?*
  - *What collaborative arrangements will be needed for effective and efficient conservation?*
  - *What are the capacity building and upgrading activities needed to support this conservation system?*
- Development of a draft strategy for efficient and effective conservation of priority collections;
- Draft strategy reviewed by the Trust and external experts;
- Draft strategy circulated to partners;
- Appropriate forum consulted for endorsement;
- Final conservation strategy submitted to the Trust.

Network cross-cutting issues

The Network Coordinating Groups (NCGs) – Introduction to cross-cutting issues, including terms of reference of the NCGs

L. Maggioni summarized the Terms of Reference of the Network Coordinating Groups, defined as groups of a maximum of 5-7 people, established within each Network (crop and thematic) and composed of the Working Group or Task Force leaders plus a number of other co-opted Network members. The NCGs are coordinated by a *Network Coordinator*, selected by the Group among its members and with the task of delivering the NCG outputs to the ECP/GR Secretariat and to the ECP/GR Steering Committee.

Responsibilities of the NCGs are to formulate proposals, in consultation with Working Groups (WGs), or in the case of thematic networks other active groups, for the attention of the Steering Committee on WG priorities and activities, following the planning and prioritizing mechanism established by the Steering Committee; they also need to define which of the WGs will remain prioritized during the 5-year Phase, according to the planning and prioritizing mechanism established by the Steering Committee. They are also expected, before the mid-term Steering Committee meeting, to assess in standard format the progress made by the Networks, including progress made and constraints encountered. They need to produce a report reviewing the division of tasks within the Network in the current Phase VII and a proposal for the subsequent Phase VIII, focused on the proposed Working Groups to remain active, the activities to be undertaken and an estimate of the necessary funds. At a later stage, towards the end of this Phase, on the basis of recommendations deriving from the Steering Committee meeting of September 2006, the NCGs will need to assess the progress made by the Networks during the second half of Phase VII and, in consultation with WGs, establish division of work within the Network in the subsequent Phase VIII, with a definition of specific priorities and objectives and of clear, measurable targets, dates for completion and

estimates of funding required from ECP/GR, based on funds allocated by the Steering Committee to each Network/WG.

Apart from their primary task of monitoring progress and forward planning within Networks, the NCGs were invited to take the opportunity of this meeting in order to reflect on cross-cutting issues and to make proposals for joint actions and problem solving. A document circulated by the Secretariat in advance of the meeting identified a number of cross-cutting issues to be addressed in the areas of Documentation, Sharing responsibilities, *In situ*/on-farm conservation, Pre-breeding, Public awareness and on the mode of operation of ECP/GR in general. The groups were also reminded that a specific budget for cross-cutting issues initiatives was available and that the NCGs were the most appropriate bodies to initiate proposals on the use of these funds (a total of nearly 33 000 euro, of which only around 12 000 had been definitively allocated at the time of this meeting).

Documentation issues

F. Begemann reported on the activities of the Documentation and Information Network (D&I Network) and current issues related to PGR documentation in Europe.

- A **meeting of the D&I Network Coordinating Group was held jointly with the EURISCO Advisory Group** in Bonn in April 2005. Major topics discussed were: the structure of the D&I Network (streamlined by suppression of the former Internet Advisory Group – new structure as in Fig. 1 below); PGR data flow in Europe; international role of EURISCO, and guidelines and priorities for EURISCO development at IPGRI; budget assigned to EURISCO by ECP/GR.[4]

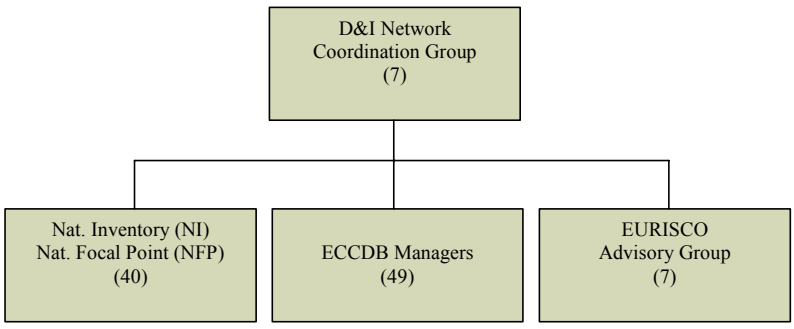

Fig. 1. D&I Network Structure.

Some progress has been made in all areas, but there is still much to be done:

- **Development of *in situ*/on-farm descriptors**

Whereas the documentation of *ex situ* germplasm is fully standardized (use of the FAO/IPGRI *Multi-crop Passport Descriptors),* there is no equivalent yet for the *in situ*/on-farm component. The development of these descriptors is under way, coordinated by IPGRI. First steps were made at the PGR-Forum Workshop on *in situ* data management methodology, 8-10 Sept. 2003, Prague, Czech Republic. A first draft version of the List of Descriptors for

[4] The summary report of the joint meeting is available on-line (http://www.ecpgr.cgiar.org/Networks/Info_doc/Bonn_April05.pdf).

Crop Wild Relatives was released in October 2005 (UNEP-GEF Project on Crop Wild Relatives).

F. Begemann provided the following information regarding the related EU regulatory framework:

- Financial support for on-farm-management (landraces):
  Council Regulation 1257/99 to be continued as 1698/2005 European Agricultural Fund for Rural Development (EAFRD), Art. 39 (5): "Support may be provided for the conservation of genetic resources in agriculture for operations not covered by the provisions under paras. 1 to 4." Rules for implementation are under development (para. 28); they exclude research.
- Marketing of landraces (PGR *in situ*/on-farm):
  EU 98/95 and Commission Directive on implementing rules (last version Nov. 2005) provide definitions and rules for marketing, including registration (certification):
  - Conservation varieties
  - Amateur varieties (of vegetable species)
  - Preservation seed mixtures (mainly forages)

  The Standing Committee on Seed is in charge of the development of the above-mentioned Directive.

- **Clarification of PGR data flow in Europe**

F. Begemann pointed out that the current level of organization/integration of all elements involved in the data flow is quite different for *ex situ, in situ* and on-farm data:

	ex situ	on-farm	*in situ*
Nomination of National Focal Points for National Inventories by National Coordinators	√	-	-
Establishment of National Inventories	many	a few	?
Establishment of European Catalogue	EURISCO	-	- (part of EURISCO)
Data exchange formats between National Inventories and European Catalogue	√	-	- (coordinated by IPGRI)

Regarding EURISCO, the following suggestions were made:

- **International role of EURISCO**

Global Biodiversity Information Facility (GBIF) developments should be monitored; IPGRI should call a meeting with FAO and ECP/GR Network representatives to reduce duplication of effort; revision of the process of accession data acquisition; create links with Global Crop Diversity Trust and other regions; the ECP/GR Inter-regional Cooperation Network could consider documentation workshops in other regions.

- **Relations between EURISCO and ECCDBs**

ECCDBs should harmonize their structure with EURISCO; ECCDB managers could focus on user-oriented scientific activities (data analysis, tailored services,...); 3-4 ECCDBs should be selected to analyze discrepancies between EURISCO and ECCDB (wheat, forages, etc.); linkage with ECCDBs (including characterization and evaluation data) to be revisited at the EURISCO-Advisory Group meeting (2007, Rome).

Further developments of EURISCO are expected to be implemented by the EPGRIS2 project, as detailed below.

- **EPGRIS2** project (EU 870/2004) (coordinated by IGER, UK)

Project **objectives** are the further development of EURISCO by specifically focusing on:
- increasing the quantity of data in EURISCO and including characterization and evaluation data
- providing more efficient, user-friendly methods for data exchange between data providers and EURISCO
- training and supporting National Focal Points and others in the new capabilities of EURISCO, and promoting it throughout Europe
- implementing demonstrator portals for four crops important in Europe, bringing together information about the crops, their uses, plant genetic resources and other useful data (lettuce, *Lolium*, *Beta* and barley)
- providing a Web-based service for visualizing geographical origins of populations and the distribution pattern of associated data
- improving the quality of plant names in EURISCO, and extending its search capability to include common names in European languages

Project aims are defined as:
- increase access to information on Plant Genetic Resources held in Europe
- support the Member States in the further development and dissemination of National Inventories of PGR
- work in close collaboration with other international organizations
- ensure the capability to meet European obligations for documentation of plant genetic resources
- contribute to the Clearing House Mechanism (CHM) of the CBD and to the implementation of the Global Plan of Action

Discussion of PGR data flow *in situ*/on-farm: there is also ongoing discussion on potential contributions of the EGRISI project (**E**uropean **G**enetic **R**esources ***I**n **S**itu* **I**nventory) to the requirements regarding the *in situ*/on-farm data flow as already mentioned above: nomination of National Focal Points for National Inventories by National Coordinators; establishment of National Inventories for landraces and crop wild relatives; establishment of a European Catalogue (EURISCO – PGR Forum); data exchange formats between National Inventories and European Catalogue.

- Another recent activity of the D&I Network was the participation in the **Workshop on "Inventorying European Cultivated Plant Species"** held in Warsaw, Poland, January 2006. In the absence of H. Knüpffer, Siegfried Harrer (IBV) reported on the major outcomes of the workshop: it was agreed that it was too late to submit a project for the second call for proposals of EU870/2004, and there was a need to identify funding sources; a group was constituted with the responsibility for drafting a proposal. This group is chaired by H. Knüpffer.[5]

Discussion
On the issue of the possible future European data structure, L. Maggioni confirmed that IPGRI agrees to the principle of placing *in situ* and *ex situ* data under the umbrella of the EURISCO catalogue.

[5] For more information see also the short report published in the IPGRI Newsletter for Europe 32:14 (also available at http://www.ipgri.cgiar.org/publications/pubfile.asp?ID_PUB=1131).

Following a question by N. Maxted, F. Begemann confirmed that, regarding the development of *in situ* descriptors, the contribution made so far by the PGR Forum was acknowledged. Other initiatives are also taking place which are dealing with *in situ*, including on-farm information. Among these, there is a UNEP-GEF project, as well as a legislative process. The EGRISI project will offer an opportunity to strengthen the links between all these initiatives.

K. Tobutt suggested the need to include someone from the *In situ* and On-farm Conservation NCG into the Documentation and Information NCG. N. Maxted, Coordinator of the *In situ* and On-farm Conservation NCG, supported this suggestion.

P. Freudenthaler noted that the definition of the term "landraces" may eventually include the concept of amateur varieties in the European Regulation currently under preparation, although these varieties may be new and are certainly not landraces.

F. Begemann remarked that, independently of the final text and definitions, it will be important to keep in mind that the term "landraces" will go through a regulatory process, of which the EU countries will need to take account.

The In Situ *and On-farm Conservation Network as a Service Network*

N. Maxted explained that the objective of this session was the attempt to match Crop Networks' requirements to the *In situ* and On-farm Conservation Network's workplan. The overall objective was to meet targets and goals of the CBD, GPA, ITPGRFA, GSPC (Global Strategy for Plant Conservation), EPCS (European Plant Conservation Strategy), 2010 Biodiversity Target and SEBI 2010 (Streamlining European Biodiversity Indicators 2010 project).

He explained that the *In situ* and On-farm Conservation Network is focusing on Genetic Reserve Conservation (the location, management and monitoring of genetic diversity in natural wild populations within defined areas designated for active, long-term conservation) and On-Farm Conservation (the sustainable management of genetic diversity of locally developed traditional crop varieties with associated wild and weedy species or forms by farmers within traditional agricultural, horticultural or agri-silvicultural cultivation systems). Achievements of the Genetic Reserve Task Force consisted in the organization of the First International Conference on Crop Wild Relative Conservation and Use held in Agrigento, Sicily, September 2005, the publication of five "Crop Wild Relative" bulletins and the production of a "Genetic Reserve Management" paper in the IPGRI Technical Bulletin series. The Task Forces' achievements were inter-related with and significantly enhanced by the results of the PGR Forum, which included the production of CWRIS (Crop Wild Relative Information System) and the European CWR Catalogue, from which individual National CWR Inventories could be downloaded. The On-farm Task Force produced a preliminary list of on-farm conservation activities (still to be published) and descriptors and methodologies, produced on a local basis. Planning for the future includes a Genetic Reserve subgroup meeting in September 2007 and the publication of three more "Crop Wild Relative" bulletins. The On-farm Task Force will hold two meetings (June 2006 and September 2007) and a Home garden/on-farm conservation definition meeting (date to be confirmed). Moreover, a publication on "European landrace conservation" is planned in the IPGRI Technical Bulletin series.

The preparation of three projects was mentioned as a result of the activity of the Network:

- PGR Forum (European Crop Wild Relative Diversity Assessment and Conservation Forum): this was a Thematic Network funded under the EC Framework 5 and completed in November 2005, to provide a European forum, a Network of Excellence, for the assessment of the taxonomic (species) and genetic diversity of European wild crop relatives and develop appropriate methodologies that can be applied to conserve this diversity;

- ONFARMSAFE (**On-farm safe**guard of plant genetic resources), submitted under EC 870/2004 call 1, with the objective of sustaining and promoting on-farm conservation of landraces through use, where their current and potential value is greatest in Europe;

- EGRISI (**E**uropean **G**enetic **R**esources ***I**n **S**itu* **I**nventory) to be submitted under EC 870/2004 call 2, with the objective to inventory European crop wild relatives (CWR) and crop landrace (LR) *in situ* resources and make the information available via a decentralized, permanent and widely accessible Web-based information system.

The Crop Networks' coordinators were asked to give an overview of how they could see the *In Situ* and On-farm Conservation Network interacting with their Network and about their needs in the *in situ* context.

Cereals

N. Maxted reported on a message received from H. Knüpffer, specifying that downloading of national data sets from the PGR Forum European CWR Catalogue available via CWRIS would be very important and that there is a need to do gap analysis in order to clarify which material is included inside or outside protected areas.

Forages

B. Boller said that *in situ* conservation was very relevant and that the case of forages was very particular, since *in situ* conservation of forage plants relates to plant communities consisting of many different species of forage plants. These plant communities of permanent grassland were not usually ever sown and they develop under moderate human interference. Forage plants conserved *in situ* in this way could therefore be considered similar to crop wild relatives. Additionally, in some species like *Medicago sativa*, on-farm conservation of landraces is also of interest.

Fruit

K. Tobutt said that pear, cherry, plum and grapes are considered native to Europe and landraces exist not only for these crops, but also for apple, apricot, almond and peach. A number of species that are relatives of the fruit crops also grow in Europe.

Considering possible interactions between the Fruit Network and the *In Situ* Network, proposals for the short term were the following:

- *'In Situ'* presentation at forthcoming *Malus/Pyrus* meeting in 2006
- Fruit Network inputs to *In situ* meetings – 2006 (1) or 2007 (2)
- Fruit Network Workshop on *in situ* and on-farm conservation – 2008?

The example of *Vitis* was mentioned and the following relevant issues were listed:

- *Vitis vinifera* subsp. *sylvestris* is native to Europe
- There is a very high level of genetic erosion
- Inventories of populations were made, but no reintroduction is practiced
- There are many autochthonous cultivars of *V. vinifera* subsp. v*inifera*
- Funding is needed
- Public awareness is needed to involve companies, growers, regions, etc.
- Several fruit crops are neglected by ECP/GR: *Fragaria, Cornus, Cydonia, Mespilus, Ribes, Rubus, Sambucus, Sorbus* and *Vaccinium*.

Sugar, Starch and Fibre Crops

L. Frese mentioned that the WG on Fibre Crops (Flax and Hemp) should consider distribution of the species *in situ*. On the other hand, *in situ* conservation of potato wild relatives and landraces should be delegated to South America.

The *Beta* WG is interested in conservation reserves and there is a need for a more formalized information flow between networks and agencies at the national level.

The European information systems already contain information that can be used for management. Information on the presence of wild species in protected or unprotected areas would be relevant as well as knowledge on how to manage the species in the reserves.

It was considered that any information system (such as the ECP/GR databases) should always be developed in collaboration with those who hold the material. L. Frese offered to use *Beta* as a test case in order to prove whether ideas on *in situ* conservation developed in the office can be applicable in practice.

Vegetables, Medicinal and Aromatic Plants

D. Astley explained that the Network situation is complex, since there are many Working Groups (WGs) with many crop genera. Only some WGs can say that there are endemic crop wild relatives in Europe. In these cases there is interest in the geographical distribution of the species. Increasing interest is also dedicated to on-farm conservation in all the groups and there is increasing awareness of participatory breeding. Most actions are carried out at the national level; nothing is done at the group level. In certain areas collaboration with the *In situ* and On-farm Conservation Network would be welcome, mainly at the WG level.

D. Baričevič added that the MAP WG would welcome collaboration with the *In situ* and On-farm Conservation Network, since all MAP species considered by the WG are autochthonous and grow in the wild. The WG is developing descriptors for *in situ* conservation; therefore there is a need to work in collaboration.

Inter-regional Cooperation

L. Dotlačil gave an update on the Inter-regional Cooperation Network's activities.

The following areas of cooperation had originally been identified, following the circulation of a questionnaire about regional networks' needs and priorities: on-farm/*in situ* conservation; documentation and information system development; and policy implementation. Inter-regional cooperation activities were subsequently carried out as follows:

- Organization of a workshop on information and documentation for African networks (jointly with IPGRI-SSA (Sub-Saharan Africa) and GRENEWECA (Genetic Resources Network for West and Central Africa) in Cotonou, Benin, 2003). The objective was to identify needs and priorities in documentation, training, infrastructure and institutional support, and establish links with the EC-funded project EPGRIS;

- Participation of members of SSA networks in the EPGRIS meetings in Lisbon and Alnarp (2003);
- Organization of a workshop on policies implementation (Addis Ababa, Ethiopia, 2003), jointly with IPGRI-SSA, GRENEWECA and EAPGREN (Eastern Africa Plant Genetics Resources Network). The objectives were to enhance knowledge among genebank managers on the ITPGRFA and the CBD (in particular the Bonn Guidelines); to promote the sharing of experience and views regarding implementation of the new international agreements; to improve transparency on procedures at the national and regional level; to increase capacities among genebank managers to deal with the implementation of the international agreements, in particular issues of access and benefit sharing; to develop mechanisms for inter-regional collaboration on the implementation of the international agreements. During this workshop, a few priority areas were identified, including the development of national PGR programmes, awareness raising and the new roles for genebanks (documentation of indigenous knowledge, technical support to informal seed systems, germplasm enhancement, etc.). Regional proposals were advanced for a standard MTA and the establishment of a regional genebank or other mechanisms for sharing of responsibilities were taken into consideration.

An account was then given of the last meeting of the NCG in Ljubljana, Slovenia, in April 2005.[6] Areas of importance for further collaboration between ECP/GR and other networks were redefined as being: documentation, training, development of GR policies at national as well as institutional levels.

Due to the very limited financial resources for network activities, it was pointed out that the Inter-regional Cooperation NCG could only have a facilitating function, through which other ECP/GR Networks and Working Groups could be informed about interests and needs for collaboration from other regions. The regional network coordinators were considered as the key persons in this context and establishing regular information channels was thought to be a first step towards an increased collaboration and stronger partnership. The group therefore agreed that the available funds allocated to the Inter-regional Cooperation Network could be best used if spent on the participation of key persons in relevant meetings. Information that could be shared on a regular basis by the task force with other networks and National Programmes could be the notification of workshops and training opportunities within the identified areas of collaboration.

Discussion

F. Begemann reminded the meeting that the German agency *InWent* regularly runs training courses and that it is often difficult to find candidates for staff exchanges and training. The ECP/GR Inter-regional Cooperation Network could offer good links and advice on this.

He also mentioned that the infrastructure of GRPI (Genetic Resources Policy Initiative) could be used with regard to training in documentation and policy matters. B. Visser reminded us that the Addis Ababa meeting took GRPI into account, and that GRPI works at the national level, while there is interest in looking at the institutional level and clarifying what it means in practice for genebank managers to have a policy in place.

N. Maxted mentioned the imminent launching of an EU-funded project called Agro-Forte ("Agro-fortification: networking on sustainable use of PGR"), which will deal with the exchange of information and ideas among regional networks.

---

[6] Report available at http://www.ecpgr.cgiar.org/Networks/Inter_reg_coop/Minutes_interregcoop_NCG.doc

Suggested elements to link Network operations to national programmes

S. Harrer and F. Begemann, IBV

S. Harrer described the PGR arrangements and the National Programme in Germany. Plant breeding research is carried out by the Federal Centre for Breeding Research on Cultivated Plants (BAZ), with a head office in Quedlinburg and various institutes distributed around Germany. In addition to this, research is also carried out at universities, institutes of the Laender and private companies. *Ex situ* conservation is guaranteed by genebanks and botanical gardens. The main collection is maintained at the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, which includes branch stations at Gross Lüsewitz and Malchow for potato, and for oil and fodder plants, respectively. The BAZ maintains the fruit collection at the Institute of Fruit Breeding (IOZ) in Dresden–Pillnitz and the grapevine collection at the Institute of Grapevine Breeding (IRZ), Siebeldingen. The Land Institute for Crop Husbandry in Forcheim holds the tobacco collection.

In situ conservation and on-farm management are carried out in 14 National Parks, 14 Biosphere Reserves, over 80 regional parks and in other protected areas, as well as on farms and in gardens.

The National Work Programme on Plant Genetic Resources of Agricultural and Horticultural Crops was formally established in March 2002 and was developed under the leadership of the German Ministry of Food, Agriculture and Consumer Protection, with strong involvement of other relevant actors, such as the Federal and Laender governments, research institutions, breeding organizations and non-governmental organizations. The Programme is based on the structure of the Global Plan of Action (GPA).

The objectives of the programme are the following:

- To maintain the diversity of plant genetic resources for food and agriculture (PGRFA) and their wild relatives (*in situ* and *ex situ*) for the long term in a cost-efficient and scientifically sound way;
- To promote the use of PGR, e.g. through better characterization, evaluation, documentation and pre-breeding;
- To use a wider range of agricultural and horticultural (including ornamental) crops in market-oriented and sustainable production;
- To promote the conservation and rehabilitation of agricultural and horticultural ecosystems;
- To promote greater transparency in the shared responsibilities of the competent authorities at the Federal and Laender levels and among all stakeholders involved;
- To exploit synergies from closer cooperation at national and international levels.

The supervision of the programme is ensured by an advisory and coordination committee (BeKo), which is supported by thematic working groups.

Federal and Laender Governments, Research Institutions, NGOs and the private sector all participate in the implementation of the programme, according to their expertise and available capacities.

A national Working Group on ECP/GR has the task of giving advice to the BeKo on crop specific and thematic questions, to "guide" the German participation in the ECP/GR, to prepare forthcoming ECP/GR meetings, to report back on the results and to contribute to the further development of ECP/GR. This group is composed of scientists/experts from the following institutions:

- Information and Coordination Centre for Biological Diversity (IBV)
- Federal Centre for Breeding Research on Cultivated Plants (BAZ)
- Leibniz Institute of Plant Genetics and Crop Plant Research (IPK)

- Plant Breeding Society (GPZ)
- Society for advancement of private German plant breeding (GFP)
- Federal Agricultural Research Centre (FAL)
- Kern (Network for the Conservation, Recultivation and Utilization of Crop Diversity), Federation of the Organic Food Industry (BÖLW), Association of Chambers of Agriculture (VLK), German Agency for Technical Cooperation (GTZ), Council for Agricultural Research in the Tropics and Subtropics (ATSAF)

Following the German experience, the main elements proposed in order to link ECP/GR Network operations to national programmes consist of: creating a national ECP/GR expert group, with the broad involvement of all stakeholders; establishing a strong linkage between the Networks and the National Programme; and ensuring coordination in the preparation of the participation in ECP/GR meetings, analysis of results and the proposal of recommendations. Exchange of information is also very important, to be conveyed through meetings, email, Internet and Intranet.

A European Genebank Integrated System: the ECP/GR-funded AEGIS project (feasibility study)

The AEGIS Project was presented by the project manager, Birgitte Lund. A short background was given on why and how this two-year feasibility study has been funded within the ECP/GR from mid-2004 to mid-2006.

The project focuses on how long-term conservation responsibilities can be shared in Europe and it will give recommendations to the ECP/GR Steering Committee for the possible model of "A European Genebank Integrated System (AEGIS)". An AEGIS Steering Committee has the strategic oversight function. The technical Project Partners represent 11 countries plus the Nordic countries and the South East European Development Network (SEEDNet). The Project Partners work with four model crops: *Allium*, *Avena*, *Brassica* and *Prunus*. The project partners will take part in three meetings and each of the crop subgroups is going to prepare a sub-group report to be compiled in a final project report. Alternative models will be assessed and proposals of models for AEGIS will be formulated. Any legal issues and constraints which have so far been identified for development of the system have been raised and taken forward to be resolved.

A document "A Strategic Framework for the Implementation of a European Genebank Integrated System – Discussion Paper" has been prepared by the Local AEGIS Task Force at IPGRI through a consultative process with the AEGIS Steering Committee and the project partners. The document has also been circulated among the ECP/GR Steering Committee members for their comments: they have subsequently been asked to endorse this document and for their agreement to publish it as an ECP/GR publication. The document describes the operational principles of an integrated genebank system in Europe and the implementation process including the benefits to be obtained with the establishment of such a system.

According to this paper, the overall benefits of establishing a European genebank integrated system will be to improve collaboration among European countries for long-term germplasm conservation activities, in order to improve efficiency and quality, reduce redundancy and facilitate access. Such a system will be based on defined and agreed terms and conditions for an AEGIS quality management and monitoring system. The vision for the future is to establish a decentralized genebank, resulting from coordinated operations of the existing genebanks and other collection holdings in Europe. Germplasm, on an accession basis, will be offered to the system by each ECP/GR member country and the respective ECP/GR Crop Working Group will make the decision on whether the accession will be accepted and designated to the system. The ECP/GR Crop Working Groups will be given

the responsibility for preparing and coordinating the implementation of crop conservation action plans. This means that the accessions will most often be conserved and maintained in decentralized collections, i.e. in the same locations where they are currently stored. However, the documentation system will be centralized as in the European Central Crop Databases and in EURISCO.

To continue the establishment of AEGIS it is necessary that the ECP/GR Steering Committee at their mid-term meeting in September 2006 will formally endorse the recommendations given in the final AEGIS project report. It is then proposed that the ECP/GR member countries will be invited to sign a collective Memorandum of Understanding in which the responsibilities of the countries will be described, so as to continue the process of implementation of AEGIS.

Additional information on AEGIS can be found at www.ecpgr.cgiar.org/AEGIS/AEGIS.htm.

AEGIS Vision for the future

A possible scenario for how a European Genebank Integrated System (AEGIS) could be imagined in the future was presented by means of a role play projecting the "ideal" situation in the conservation and management of plant genetic resources as it could be imagined in 2015, following the successful implementation of AEGIS. The role play involved three participants, playing the parts of a Steering Committee member, a Crop Working Group member, and the ECP/GR Secretariat:

1. ECP/GR Steering Committee perspective

G. Kleijer, playing the role of a Steering Committee member giving a presentation on 29 March 2015, said that AEGIS started in 2007 within the framework of ECP/GR, based on formal country membership through the signature of a collective Memorandum of Understanding. The goal is to ensure better integration and sharing of responsibilities in Europe for the long-term conservation of genetically unique and important accessions. The AEGIS membership includes 44 member countries (all European countries) and 20 Working Groups are effectively operating with 20 Crop strategies and 21 Lead institutions. The number of unique AEGIS accessions amounts to one million and the AEGIS germplasm is conserved in 40 institutes in 35 countries.

Regarding the sustainability of AEGIS, he said that the initial cost (activation energy) to implement the system was provided 60% by the European Union (2007-2010), and 40% by the member countries, covering the following:

- Meetings of the Working Groups for coordination and implementation of AEGIS;
- Four ECP/GR Steering Committee meetings (for consultation and implementation of AEGIS);
- Crop-specific analysis of the databases and identification of AEGIS accessions, complemented with molecular marker analysis for vegetatively propagated crops;
- Definition of a model for the establishment of AEGIS crop-based Conservation Quality Systems.

He specified that 44 countries have collectively offered (designated) a total of 1.5 million accessions to AEGIS. Subsequently, the Working Groups delegated the particular institution holding the European Database for a specific crop to analyze these offers and to determine which accessions should be considered unique and important and become AEGIS accessions. The criteria for this definition were agreed by the WG on the basis of the Most Appropriate Accession concept. A total of 1 million accessions were accepted by the WGs as part of the AEGIS collection.

On the basis of the AEGIS Memorandum of Understanding, the 1 million AEGIS accessions are:

- All conserved for the long-term according to quality standards agreed by the corresponding WG;
- All safety-duplicated as a black box in a second institution as well as in Svalbard;
- All available for utilization for research, breeding and training. They are being distributed according to the terms of the International Treaty sMTA;
- All documented with passport data; 75% are characterized, and 15% are evaluated. Data are available from the CCDBs and EURISCO.

Regarding the sustainability of the conservation activities, he clarified that all routine conservation costs are carried by the respective holding institutions/countries. The routine management of the Central Database is offered by the lead institution. An AEGIS fund is available, as part of the ECP/GR programme and it is managed by the Working Groups according to their needs, in the framework given by the Steering Committee. It can be used to cover part of the regeneration or characterization costs, etc.

The role of the National Coordinator, with a mandate and a budget from the Ministry of Agriculture, is to coordinate the PGR stakeholder community within the country and to undertake the following actions:

- Communicating to the ECP/GR Secretariat the country's offers of germplasm accessions for designation to AEGIS;
- Agreeing to the final and actual designation of AEGIS accessions for X number of crops, as determined by the Crop Working Group;
- Communicating to the ECP/GR Secretariat what else the country can offer to the AEGIS system in terms of equipment and expertise (database management, cryopreservation units, safety-duplication space, regeneration capacity, etc.);
- Overseeing implementation of conservation obligations at the national level, as well as compliance with quality standards and with transfer of material;
- Reporting to the ECP/GR Steering Committee, of which she/he is a member, on the implementation of AEGIS at national level.

The ECP/GR Steering Committee oversees all the operations and functioning of AEGIS, with the following functions:

- Discusses the budget and its management;
- Monitors the implementation of crop conservation plans;
- Discusses problems in the integration of the various elements of AEGIS (effectiveness of quality standards, distribution of tasks throughout European institutions, national level problems requiring regional support, policy and financial issues, relationship with other regions and initiatives);
- Delegates coordination activities to the ECP/GR Secretariat.

Finally, the agenda for the next Steering Committee meeting was presented, including the following items:

- ECP/GR budget for Phase X (AEGIS, Thematic Networks, Secretariat);
- EU contribution to AEGIS;
- Review of results of the internal review of the AEGIS Quality Standard System;
- Proposal from *Syldavia* to include *Newcrop* in AEGIS and its offer to provide leading institution, database management and regeneration facilities;
- Other business

2. ECP/GR *Allium* Working Group perspective

D. Astley played the role of a Working Group member giving a presentation in 2015, on the 33rd Anniversary of the *Allium* Working Group. At this date, 28 ECP/GR member countries collaborate in the *Allium* Working Group. The European *Allium* database (EADB) holds data for 13 450 accessions including seed and vegetatively propagated material. The Working Group coordinates two European Integrated Systems reflecting the different technical requirements and Quality Standards for the conservation of seed and vegetative material.

The Working Group is structured in two sub-groups, that is the Vegetative *Allium* and the Seed *Allium* Networks.

The ECP/GR Vegetative *Allium* Network works with collections of garlic, shallot and wild taxa. Historically garlic was identified as the priority crop and the working routines established were adapted for shallot and some wild taxa.

In the case of garlic, 14 countries designated 3406 accessions available to AEGIS. The *Allium* database was used to identify clonal duplicates historically deposited in institutions as safety-duplicates. After removal of obvious duplicates all remaining accessions (2233) were fingerprinted using standard screening technologies at one of the institutional Molecular Screening Centres sanctioned by the Vegetative *Allium* subgroup. The fingerprinting identified 1666 accessions as being unique clonal material.

Eight institutes collaborate to conserve both short-day and long-day garlic material in cryopreservation following agreed standard protocols.

The work is governed by strict technical and quality assurance (QA) protocols. All new accessions are fingerprinted to determine "uniqueness" by one of the WG ratified and audited Molecular Screening Centres. All unique accessions are designated as the Most Appropriate Accession in the EADB and by agreement with the national donor. *In vitro* culture is used to "clean" the material to remove viruses. Each accession is cryopreserved as a European Vegetative Accession (EVA) and at least one European Safety-Duplicate (ESD). Currently a total of eight institutions act as cryorepositories for EVA and ESD material. Each institute is audited for QA biennially.

Shallot conservation follows this scheme with three institutions acting as European cryorepositories.

Wild taxa are more complex to deal with, hence material is still in field collections and only selected accessions are cryopreserved. The structure of the European network for cryopreserved *Allium* is shown in Fig. 2.

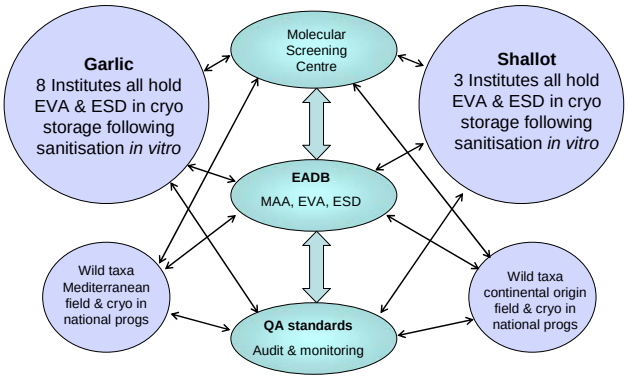

Fig. 2. European network for cryopreserved *Allium (a vision for 2015)*.

The Vegetative *Allium* Network, including the WG Chair and the EADB manager, acts as the coordinating body for the network. The subgroup holds quarterly Internet video conferences to review workplan progress, characterization schedules and future goals. All partners are responsible for maintaining regular links with their National ECP/GR Coordinator, reporting on progress, technical developments and funding options. An emergency notification system is in place in the event of a resource failure in a national programme. The *Allium* Network's QA biennial institute audits are carried out by members of the ECP/GR cross-network cryopreservation group as independent experts. National programmes still maintain significant numbers of clonal accessions in the field as conservation/working collections outside of AEGIS.

The second sub-group, i.e. the *Allium* Seed Crop Network has collaborating institutes in 28 ECP/GR member countries functioning as a decentralized system linked by the European *Allium* Database. A total of 9210 accessions were offered to the AEGIS programme by national programmes and 3010 have been identified as Most Appropriate Accessions for conservation, tagged in the EADB as European *Allium* Accessions (EAA). Fifteen genebanks currently act as European *Allium* Repositories for EAA following agreed QA standards. All EAA are safety-duplicated (ESD) in at least one other EA Repository, which is indicated clearly in the European *Allium* Database. Characterization data and links to evaluation projects are linked to the EAA in the European *Allium* Database. Failsafe agreements and early warning systems exist, based on ECP/GR bilateral agreements with all national partners. Twelve partner institutions have signed agreements to work as specialist seed regeneration centres for day-length sensitive material.

3. ECP/GR Secretariat perspective

B. Lund played the role of the AEGIS coordinator, giving a presentation on the perspective of the ECP/GR Secretariat in 2015. She described its role and functions in the coordination of AEGIS as follows:

- To coordinate the activities carried out in the framework of AEGIS;
- To be responsible for the financial management of AEGIS;
- To provide support and assistance to the ECP/GR Steering Committee (technical and financial reports), the National ECP/GR Coordinators (during the process of designation of AEGIS accessions), and the Working Groups (facilitating implementation of workplan activities;
- To secure overall transparency in the system;
- To gather and distribute information (crop reports; workplans; protocols);
- To provide links to other regions.

She specified that funding sources for AEGIS were the European Union and the European governments. An example of use of these funds consisted of molecular screening and cryopreservation.

The Secretariat functions for AEGIS coordination were described as mainly report writing for the EU, the ECP/GR Steering Committee and the European countries. Reports were focused on use of funds, outcome of activities and meetings and general impact of AEGIS on the different partner genebanks/institutions, including positive and negative effects.

The broker role of the Secretariat included the role of Focal Point for problem solving activities, with assistance from IPGRI staff expertise, on any legal policy, technical and administrative related matter. Moreover, the technical requirements and Quality Standards for conservation and management of seed and vegetative material were also monitored by the coordination office.

The whole system was said to be kept transparent thanks to the facilitating role of the Secretariat, by facilitating audits for QA in each collaborating genebank/institute by subgroup colleagues, by ensuring reports and information exchange, by linking to all stakeholders and other regions and by providing an AEGIS Newsletter.

Finally, she mentioned that the ECP/GR Secretariat function as Depository and Provider of AEGIS documents and information related to law, policy, system administration, technical issues, crop conservation management, quality monitoring and QA audit reports.

ECP/GR: How to move to a mode of responsibility sharing?

B. Visser, CGN and J. Engels, IPGRI

The first two decades

The European Cooperative Programme for Crop Genetic Resources Networks (ECP/GR) was founded in 1980. It is a collaborative Programme among most European countries, aimed at facilitating the long-term conservation and the increased utilization of plant genetic resources in Europe on a cooperative basis. The Programme, which is entirely financed by the participating countries, largely operates through broadly focused Networks dealing traditionally with groups of crops or, more recently, with general themes related to plant genetic resources. ECP/GR has served as a possible model for the development of similar networks in other regions of the world. Its major distinction and possibly the main reason for its success, compared to other regional crop networks, is its self-funding basis.

In Europe most activities regarding the conservation of plant genetic resources (PGR) were, and still are, nationally organized and hence highly fragmented. Over the previous two and a half decades ECP/GR has succeeded in forging collaboration between the countries and the predominantly national PGR communities involved. Such collaboration is essential since challenges to maintain PGR for future availability are large and capacity is limited, in Europe as well as elsewhere. National contributions only become valuable as contributions to a regional and/or global effort as they form the building blocks of a regional/global system.

ECP/GR: major successes

For the understanding of this paper it is important to summarize briefly the major achievements of ECP/GR.

(a) Collaborators within ECP/GR have agreed on common minimum descriptor lists to characterize/evaluate their crop collections, and to render documentation on their collections interchangeable between collection holders;

(b) As a next step, ECP/GR has undertaken to build European Central Crop Databases; until 2005, 60 such crop databases, holding passport data and, to varying degrees, characterization and primary evaluation data of the major collections of the respective crops in Europe, have been established. In addition the EPGRIS project, developed in the context of the ECP/GR Documentation and Information Network, has resulted in the establishment of the EURISCO database, encompassing a Web catalogue that automatically receives data from National Inventories. This database is already providing information on nearly one million accessions and has the potential to almost double its content in the next few years. The aim is to effectively provide access to all *ex situ* PGR information in Europe and thus facilitate locating and accessing PGR;

(c) Furthermore, Crop Working Groups of ECP/GR have been able to submit successful project proposals for EU funding. In this way, European collections have been documented, characterized and evaluated, and so-called core collections have been established for a number of crops. Most of these core collections (except for the International Barley Core Collection, BCC) are "virtual" and contain a limited set of accessions optimally covering the genetic diversity existing in (the European part of the) crop genepool, including as much as possible the original samples and excluding duplications.

Whereas ECP/GR has provided a forum for a number of additional activities, the aforementioned results probably stand out as ECP/GR's most prominent and lasting successes, together with the creation of a general spirit of mutual collaboration. This was built on the frequency of meetings among representatives of rather different and fragmented worlds, coming together to get to know each other and to develop reciprocal esteem and trust.

The results detailed above strongly contribute to the possibilities for analyzing existing information on and the distribution of knowledge regarding existing collections and associated accession-level information in the European region amongst the PGR community and to users. This achievement, in turn, has increasingly allowed us to avoid duplication of efforts by collection holders. As a consequence, these results may have also contributed to reduce the amount of over-duplication of accessions in collections in Europe, and may have promoted better utilization of the collections. However, this anticipated positive outcome is not *per se* the result of explicit joint decision-making in ECP/GR, although - without any positive proof - it could be hypothesized that decisions at the national level on avoiding over-duplication may have been taken on several occasions and in various countries, as a result of the influence of concepts elaborated within the ECP/GR networks. As a first step these results have contributed to initiating a process that will eventually result in a more rational regional system.

ECP/GR: apparent limitations so far

Considering the above-mentioned commendable achievements, it is also fair to state that more advanced and concrete collaboration activities, encompassing task sharing in proper conservation efforts such as acquisition, regeneration, characterization, evaluation, storage, viability testing, etc., have not yet been achieved, possibly with the exception of some joint activities carried out in the framework of EU GENRES projects. Task sharing could potentially lower the costs and improve the quality of these collaborative activities considerably by allowing members to make optimal use of available expertise and facilities, with the aim of reducing collective costs and, directly or indirectly promoting the raising of quality standards. Such task sharing could allow either financial or in-kind cost savings between genebanks. Task sharing along these lines would also require and promote political commitment and mutual trust, aspects that have not or only to a very limited extent been addressed by ECP/GR. Hence, such task sharing would be a major second step towards establishing a rational regional system. Such task sharing was indeed the aim of the AEGIS initiative, addressed in more detail below.

Analyzing the pace of progress within ECP/GR

Since task sharing between European countries is obviously a very important goal, whether in the form of AEGIS or otherwise, at first sight the relatively slow progress towards attaining this goal within the ECP/GR context, and the reservations registered during the AEGIS feasibility study, may be surprising and require a closer look. Analyzing why progress has been slow, and how bottlenecks can be removed and reservations or even

objections may be changed into enthusiasm and commitment, is therefore a crucial task. Several motives and mechanisms that have so far prevented fast progress can be distinguished, and thus provide the basis for the identification of possible solutions that would remove existing concerns and constraints.

- **Technical considerations**

The quality standards for conservation, as currently applied, vary considerably between countries and even within countries. This was identified as a constraint by several ECP/GR Crop Working Groups in their attempts to define preferred or acceptable conservation standards. The frequent disparity of the standards in use tends to reduce trust in the institutions with low or ill-defined standards, and thus hampers effective collaboration. A general improvement of the quality of operations across the collaborating institutions would be expected to result from a regionally integrated system. Regional strengths could be shared and weaknesses eliminated by the process of raising standards and establishing them across the networks.

- **Political considerations**

Currently, *ex situ* germplasm collections fall under the national sovereign rights of a state and it is these same states that can use their rights to place germplasm material in a (regional) multilateral system. Decisions on task sharing require explicit agreements between participating countries on the rights and obligations of the providers and recipients of such germplasm. The rights and obligations formulated in the International Treaty and soon to be "translated" into the standard MTA, form a model that can also be applied to crops that are not included in Annex I of the Treaty and are maintained by European collection holders under the jurisdiction, management and control of European states. The new political context created by the entrance into force of the International Treaty should be influential in facilitating the adoption of its spirit and mechanism. This should be particularly true within the European region, which has been the most vocal during the Treaty negotiations in advocating the benefits of a Multilateral System extended to all crops. The European region now has the legal mechanism to operate consistently on the basis of its recommendations within its own regional territory. The AEGIS philosophy takes this approach further forward.

In addition, agreements that may eventually form the foundation for AEGIS, would have to set out principles and criteria to identify the most appropriate accessions for inclusion in the AEGIS crop collections. Development of a decision tree to arrive at the identification of the most appropriate sample, and agreement on the identification process and its adoption are major components of such principles. A similar exercise undertaken by the Global Crop Diversity Trust may be of help in developing such a system as well.

- **Implications for users**

Users of PGR in Europe are manifold, and some user groups depend on facilitated access to germplasm and associated information, now offered by national genebanks in their own language. Task sharing and re-allocation of expertise could hamper such access (if not to the germplasm proper, then to the available expertise), for instance if and when characterization and evaluation should become the responsibility of another genebank. Whereas for some individuals these concerns might sound hypothetical, for others they are very real. Agreements on a brokering role for national genebanks to identify available information and/or to assist in the communication between a user and the "foreign" genebank managing the associated information are needed to remove this potential drawback of task sharing. This role will in any case be critically important for the future operations of genebanks, whether or not as a prerequisite for system integration.

- **Implications for national capacity**

Any decision on task sharing should take into account an optimal use of existing expertise and facilities Europe-wide. In the current context of limited financial means, this would mean not only choosing the cheapest or qualitatively best expertise and facilities, but finding optimal uses for all currently and collectively available expertise and facilities. Such approach requires a shift in the mind frame and mind set of the ECP/GR members. It could also mean that in some cases less cheap or qualitatively second best expertise and facilities will have to be mobilized. So, as for the accessions, the idea is not to transfer existing expertise or re-allocate existing facilities, but to make full use of all those available. Such approach might take away the fear of the less well endowed genebanks that they might become marginalized in an Integrated System and even lose their jobs which might be taken over by the currently best functioning national systems. In order for such an approach to work, agreements will be required on minimum quality standards acceptable to and to be agreed upon by all. Furthermore, budgets will have to be found to allow those current collection holders not meeting minimum standards to upgrade their expertise and facilities.

Summary of current constraints

The current constraints to progress within ECP/GR can be summarized as at least four separate elements:

- **Feeling insecure**: formal political support is still lacking and this causes concern about the possibility of the Networks assuming new roles;
- **Atmosphere of indecisiveness**: often it is not clear who can make which decisions;
- **Keep talking**: ECP/GR is essentially a forum for meetings and is not offering a framework for policy and strategy decisions;
- **Activities limited to technical aspects**: the growing number of technical working groups is not being accompanied by more involvement of the policy makers in the ongoing activities.

ECP/GR: a possible road to progress through AEGIS, a novel initiative

In order to address the limitations and constraints to progress within ECP/GR, new ways of collaboration should be set into motion and a possible reorganization of its structure could be considered. Progress towards closer collaboration was started during the last ECP/GR Steering Committee in Izmir in September 2003. At this meeting, a concept note on AEGIS (a European Genebank Integrated System) was submitted by the German participants, who noted that "ECP/GR has only partially succeeded in facilitating a real prioritization of conservation activities (identification and safety-duplication of unique material, reduction of unnecessary redundancies, etc.)". Among the objectives for AEGIS, key proposals were to assess existing options for the sharing of responsibilities on an accession basis, a crop-by-crop basis and a sub-regional basis focusing on four model crops; to assess institutional capacities and bottlenecks for a decentralized integrated European Genebank System; and to outline conditions to be fulfilled to develop such a system. The Steering Committee adopted the proposal to develop the AEGIS project, and - for the first time in its existence - decided to provide the necessary project funds directly from the ECP/GR budget.

Based on the experiences acquired in the AEGIS feasibility study, in 2005 the ECP/GR Secretariat and the IPGRI-based AEGIS Local Task Force drafted a Strategy Framework discussion paper, in close consultation with the AEGIS Steering Committee and the ECP/GR Steering Committee. It envisages developing AEGIS from its current theoretical project phase into a new fully regional collaborative operation. It is foreseen (1) that a formal AEGIS membership of individual countries will be established; (2) that unique and important germplasm accessions will be identified; and (3) that these will be designated (by countries)

to AEGIS, thus forming the AEGIS crop/species collection. The latter will in fact be decentralized collections of widely dispersed accessions that collectively form the European genebank integrated system. The Strategy Framework also stipulates that it is anticipated to start AEGIS with the implementation of legal, organizational and administrative frameworks. These frameworks will require close consultation between the technical level expertise in individual countries and the political and administrative levels. It is expected that the National Coordinators will have to play a key role in these consultations.

The proposals contained in the Strategy Framework will need approval and AEGIS has now reached the stage in which consultations with the national policy-makers responsible for PGR policies in the respective European countries have to be initiated. One way to facilitate the "operationalization" of the ideas contained in the Strategy Framework would be to seek agreement amongst European states for the step-wise adoption of a Multilateral System of Access and Benefit-Sharing for all germplasm contained in the AEGIS collections, and thus, to effectively and greatly expand the coverage of the Multilateral System of the International Treaty in Europe, in line with the positions taken by the European delegation during the negotiations for the International Treaty. This coverage could even increase further if germplasm maintained by the private sector could be added to the envisaged AEGIS collections. Given the internationalized status of the breeding industry it seems only logical to initiate such discussions at the regional level, through discussions with the European Seed Association (ESA).

It is foreseen that the necessary funding will be made available by the individual member states of AEGIS, wherever possible with the help of the European Union through project proposals. The "justification" of such an approach is based on the assumption that in the longer-term, AEGIS will provide a very strong basis for rationalizing collections, i.e. it will allow and encourage countries to decide to not continue conserving material that is elsewhere conserved better and remains freely available to all users within the System. It assumes that AEGIS will indeed "pay off" and really result in smaller collections and therefore in lower maintenance costs in the long term. In addition, funds for upgrading might also become available from the savings that a more rational system will entail.

Without any doubt, AEGIS is a complex undertaking and it may be necessary to gain experience with this approach first before a fully developed European System will be achieved. It is foreseen that the establishment of AEGIS will be an evolutionary process, building on small steps and making use of existing arrangements.

Three inter-dependent components are currently envisaged which should be the basis for the implementation of a European genebank integrated system:

1. **Crop level.** Strategies towards AEGIS collections should be finalized, starting with the four model crops.
2. **Country level.** It is essential to set into motion a policy framework, allowing the endorsement of a mind shift from the concept of "National" to "European" collections.
3. **Institutional level.** This complementary component consists in building experience with inter-genebank collaboration, in order to contribute to the development of standards and task-sharing.

The putting into practice of the third component is proposed below as an additional case study to be promoted by ECP/GR in the context of the AEGIS development.

Two citations from the AEGIS Strategic Framework discussion paper

A conservation system that is not based on sharing information and germplasm, and that does not take advantage of the opportunity to grow germplasm where it is biologically, environmentally and economically the most adequate location for regeneration, characterization, evaluation and research, fails in cooperating effectively.

Finding the best site for the job should result in a better use of prevailing specializations in terms of crops or conservation functions such as regeneration, documentation, taxonomic research and cryopreservation.

Proposal for an additional ECP/GR case study in the AEGIS framework

The idea behind this proposal is to study the institutional issues separately from the policy aspects related to the development of the AEGIS model as elaborated in the Strategy Framework discussion paper. This case study focuses on the institutions of the collection holders or genebanks rather than on crop collections (as the current AEGIS case studies do) or on countries (the suggestion proposed in the Strategy Framework Paper). Thus, this case study would complement ongoing and proposed activities within the AEGIS framework.

The rationale is to make better use of existing facilities and expertise and to improve standards where necessary. The objective is to contribute to the rational regional system and the expected results are (i) to identify a task-sharing process and procedures; (ii) to establish technical collaboration between volunteer genebanks; (iii) to reach agreements on minimum standards and (iv) to adopt protocols for collaboration between genebanks.

The proposed approach of this feasibility study is as follows:

- Explain basic goals and options for institutional collaboration within AEGIS (framework for activities);
- Prepare an inventory of? genebank interests for task-sharing in Europe;
- Identify which genebank is needing or offering which activity;
- Organize meetings between partners with mutual interests;
- Develop workplans and conclude contracts among partners;
- Document and report to AEGIS any agreements and results;
- Adopt successful examples as guidelines for others.

The principles behind this feasibility study include the bottom-up putting into operation of the AEGIS concept, with no re-allocation of germplasm unless as a result of specific requests. Only one condition would be established, that germplasm and associated information which is subject to the collaboration should be available to third parties as if in the MLS of the International Treaty. No other *a priori* prescribed procedures and conditions would be in place and the process would benefit from "learning by doing".

Concluding remarks

The expected impact of task sharing for germplasm conservation in Europe will be the better use of existing funds; the possibility of using freed-up money to improve the quality of the work, including support for upgrading; higher work satisfaction for staff involved; and a major political signal sent to our own policy makers at the national level (and the EU), to our own funding sources and to other regions.

The hope is that ECP/GR can soon enter into a new mode, using AEGIS as the vehicle to achieve a more rational regional system and to offer justification for sustainable funding.

Discussion

G. Kleijer asked whether there would not be a risk of creating closer collaboration between bigger genebanks and excluding smaller genebanks.

B. Visser agreed that there is such a risk and it is necessary to identify the strengths of the different genebanks (e.g. crop expertise, regeneration, documentation, etc.) in order to do things where it is most efficient.

G. Kleijer commented that it is necessary to have a much broader view than simply waiting for a genebank to be willing to delegate some of its activities somewhere else.

B. Visser agreed with this remark and specified that failing to take any action may position several players in a loser's situation.

F. Begemann reminded the audience that the 7th FP will fund only "networks of excellence". These are already attracting most of the resources. It is therefore very advisable for germplasm-related institutions to try to become resource centres, thus to become capable of showing just where the excellence is. It will be necessary to capitalize on strengths, not to be slowed down by weaknesses.

With reference to the role of the lead institutions for the Crop Working Group strategies, it was specified that these would mainly correspond to coordinating institutions and not to centres of excellence.

K. Tobutt commented that centres of excellence might not be reliable references for genebanks, since expertise is often unstable, (i.e. it tends to be linked to the presence of individuals who may move on).

C. Germeier remarked that it is necessary to formalize the subdivision of tasks, otherwise nothing can move forward.

It was considered that agreements between countries for sharing of responsibilities for conservation of the collections, including staff exchanges and joint workplans, will not work simply on the basis of bilateral institutional arrangements, but will also need the involvement of the policy makers.

L. Christensen remarked that the definition of "designated accessions" was still not clear to the NGB and this will need to be further clarified in order for the Nordic countries to be able to participate in AEGIS.

J. Engels remarked that the concept of "designated accessions", which is defined in the AEGIS Strategy Framework Discussion Paper, will be tested, together with the entire AEGIS concept, in a few countries, possibly before the next ECP/GR Steering Committee, in order to face any possible reaction at the policy level. It is hoped that Czech Republic, Italy and the Netherlands will be the test cases.

Regarding the designation of material, it was commented that the situation will be different in the various countries, since for example in Germany the genebank is not under federal government control. On the other hand, in France the concept of the national collection is a national issue.

Regarding the criteria for selection of the AEGIS accessions, it was remarked that criteria for selection are not always defined, and in the case of smaller crops characterization descriptors are also not defined.

The opportunity to find more about evaluation traits among the underutilized crops was acknowledged. Centres of excellence already working on these underutilized species should be identified.

Different opinions were expressed on the most appropriate process needed to identify the maximum genetic diversity and the identification of AEGIS accessions. This process will be defined by each Working Group on a crop basis and the formulation of decision trees will be very useful, using the example which has been developed by the *Prunus* Working Group.

Conclusions

- *General consensus was expressed for going forward with sharing responsibilities for conservation.*
- *It was suggested that National Coordinators should consult with the policy-makers before replying on the endorsement of the AEGIS discussion paper, which was recently circulated by the ECP/GR Secretariat.*
- *On the proposal from B. Visser to go forward with inter-institutional collaboration, there was agreement on the need to enlarge the discussion group to more people. The objective will be to elaborate what was presented at this meeting into a document showing the available options, to be discussed at the Steering Committee in September 2006. The discussion group will be expected to clarify the comparative advantages of various institutions in Europe. G. Kleijer and M. Lateur agreed to join B. Visser in this discussion group. Others, possibly from Eastern or Southern countries, will be welcome to join.*

PART II. PARALLEL SESSIONS: NETWORK-SPECIFIC ISSUES

During the second day of the meeting, the Networks met in parallel sessions to discuss their specific agenda, including the following items: *status quo* and assessment of progress; suggestions for updating the workplan for the remaining part of Phase VII (2006-2008); suggestions for planning and prioritizing Phase VIII (2009-2013) for consideration by the Steering Committee meeting in September 2006.

Each Network produced a report which was presented and discussed in plenary session the next day. These reports, including some minor amendments incorporated after the meeting, are given below.

In situ and On-farm Conservation Network

Attending: Lothar Frese, Paul Freudenthaler, José Iriondo (Rapporteur), Nigel Maxted (Network Coordinator), Valeria Negri, Zdeněk Stehno

Network-specific issues

1. Project funding applications
   - ONFARMSAFE (On-Farm Safeguard of Plant Genetic Resources)
     - First round of regulation 870/2004
     - Methodological development through landrace case studies on farm
   - EGRISI (European Genetic Resources *In Situ* Inventory)
     - Network supports the submission to the second round of regulation 870/2004
     - Crop wild relative and landrace inventories with assessments of threat and use
   - AEGRO (An Integrated European *In situ* Management Workplan: Implementing Genetic Reserves and On Farm Concepts)
     - application through case studies of genetic reserve and on-farm conservation

2. ECP/GR should proceed with the nomination of National Inventory *in situ* Focal Points but check the wording of the invitation with the Network

3. Cross-cutting issues
   - We recognize the need to meet the requirements of Crop Networks
   - We intend to address these requirements through our future network activities
   - We encourage the participation of *In situ* Network members in Crop Network meetings and vice-versa
   - Need to be aware of EU legislation on *in situ* conservation
   - We wish to promote the *in situ* utilization (involve end-users in conservation activities, e.g. plant breeders)

Network progress

In spite of the Network having met only once, the following has been achieved:

- Development and submission of four project funding proposals

- On-farm Task Force (no project funding – ONFARMSAFE pending[7])
  - directory of on-farm conservation organizations and individuals produced
  - information regarding seed legislation collected
  - draft descriptors for the documentation of on-farm conservation and management produced
  - methodologies for the conservation of traditional varieties involving farmers and local communities drafted
- Genetic Reserve Task Force (PGR Forum funding)
  - Creation of comprehensive catalogue of CWR + detailed case studies (Web-accessible)
  - Prioritization methodology for CWR active conservation
  - CWR data structures
  - CWRIS (Crop Wild Relative Information System)
  - *In situ* management and monitoring methodologies (IPGRI Technical Bulletin)
  - Threat and conservation assessment methodologies
  - Gap analysis methodologies
  - Genetic erosion and genetic pollution assessment methodologies (IPGRI Workshop Report)
  - Crop Wild Relative Newsletter and Web site

In situ *Network response to suggestions from Crop Networks*

For both CWR and landraces:	**To be achieved through:**
• Public awareness	• Web pages, newsletters
• Inventory: expand case study data in CWRIS and make available for landraces	
• Gap analysis	• EGRISI
• Important plant areas	• EGRISI and AEGRO
• Identification of key sites	• EGRISI and AEGRO
• Promote the use of *in situ* conserved material	• ONFARMSAFE and stakeholder survey
• Systematic links between Crop Networks and *In situ* Network	• Meetings and personal contacts
• *In situ* methodologies	• Done and ONFARMSAFE
• Analysis of change	• IPGRI Genetic erosion project
• Sustainable long-term approach	• All activities

Updating workplans

- Additional actions outside those originally planned
  - actions associated with current project applications
  - possibility of joint meeting with Crop Networks in 2008
  - stakeholder/user survey
- Budget review and proposals
  - minor changes will be considered to include additional actions (see Appendix II)

[7] The project ONFARMSAFE was not among the projects funded in the first call for proposals of AGRI GEN RES 870/04.

Suggestions for planning Phase VIII (2009-2013)

- ONFARMSAFE
- EGRISI
- Implementation project (implementing genetic reserves and on-farm concepts)
- Web pages, newsletters
- Task force meetings
- Budget: 94 000 euro (see Appendix II)

Success for resource-intensive tasks is dependent on successful income from funding grants.

Discussion

A very strong potential for interaction with the MAP WG was mentioned, with a suggestion for closer interaction and joint meetings. There was agreement on this point, although the Network considers equally important the interaction with all Crop Working Groups.

It was specified that the proposed joint meeting with Crop Networks in 2008 would consist of the participation in a meeting of representatives of different Crop Networks, financed with existing budget readjustments.

It was recommended to pay attention to the interface between *ex situ* and *in situ* germplasm.

It was suggested that the *In situ* Network should draft the terms of reference for the identification/nomination of the Focal Points in charge of the *in situ* component in the National Inventory, with inputs from the Documentation and Information Network (see below, report of the D&I Network, section on *Activities for second half of Phase VII*, first point).

Documentation and Information Network

Attending: Frank Begemann (Network Coordinator, Rapporteur), Ian D. Thomas, Sonia Dias (observer)
Unable to attend: Theo J.L. van Hintum, Helmut Knüpffer, Ahmet Semsettin Tan

Network-specific issues

- Communication between Crop Networks and the D&I Network should be improved. One way could be through the ECCDB managers. There should be improved information flow from the D&I NCG through the ECCDB managers to the Crop WGs and vice versa;
- The two available seats in the NCG have been filled by Iva Faberová (agreed) and Véronique Jamilloux (agreed to invite her for the NCG).

Progress so far

- D&I Network structure has been amended/streamlined (see above, Fig. 1, p. 12)
- Meeting of D&I Network in 2005, Bonn
- PGR data flow discussed:
  - Agreed concept of PGR data flow in Europe (Fig. 3)
  - Some progress on exchange formats for *in situ*/on-farm; but further activities by IPGRI/UNEP and EGRISI expected (coordination of the formats by IPGRI)

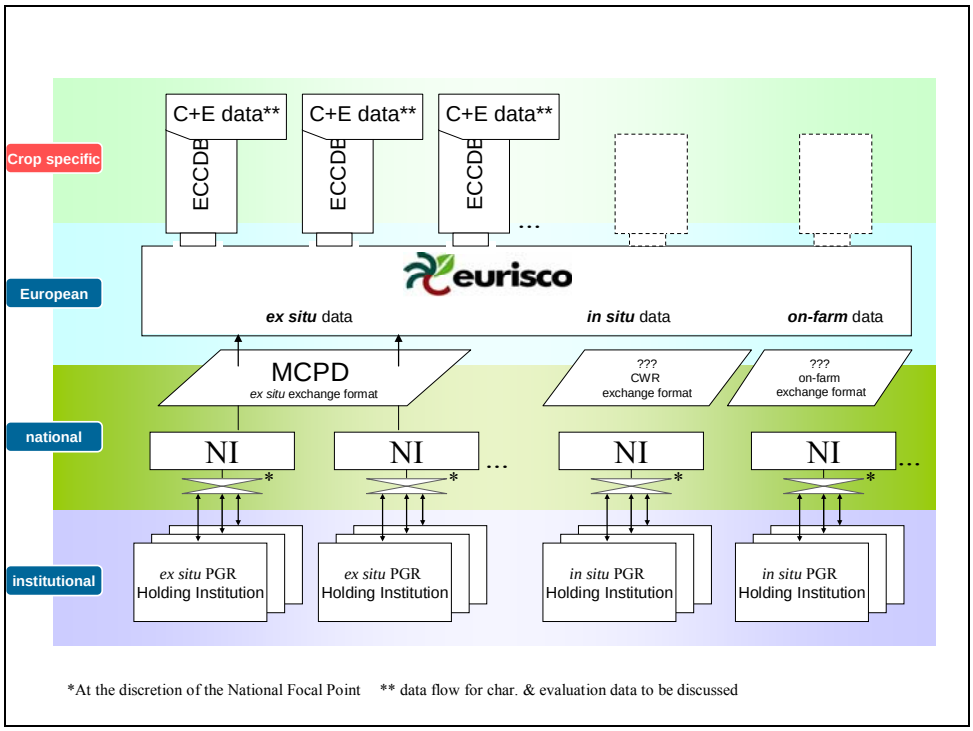

Fig. 3. PGR data flow in Europe.

- Role and functionality of EURISCO improved:
  - Agreement for EURISCO to be the overall system for *ex situ*, *in situ* and on-farm
  - Monitoring surveys constructed
  - Citation field for EURISCO and date of update of the downloaded data
  - New download functions operational
  - Increase of NI to provide data (800 000 → 970 000)
  - Monitoring visitors started (increase of visitors)
  - Public awareness materials released (posters, articles, fact sheets)
  - Demonstration of EURISCO as a model to the Latin American region (workshop IPGRI, Cali, September 2005)
  - Preparations to include EURISCO as a GBIF (Global Biodiversity Information Facility) source
  - Preparation of the EPGRIS2 proposal
  - Collaboration with the *In situ* Network on the drafting of the EGRISI-proposal
- Meeting on Inventorying European cultivated plant species, Warsaw, Poland, January 2006

Activities for second half of Phase VII

- ECP/GR Secretariat to contact the National Coordinators for clarification of whether or not *in situ*/on-farm NIs do already exist, and for the nomination of the respective Focal Points (as a preparatory step for further activities, i.e. EGRISI).
- To establish links with the relevant body (Standing Committee on Seeds) for the development of the implementing rules for marketing of PGR *in situ* ("conservation varieties, amateur varieties, seed mixtures") (EU 98/95) to clarify the notification and registration procedures.

- Further activities needed on the development and adoption of the exchange formats (*in situ*/on-farm) by IPGRI/UNEP and EGRISI (if funded) (process to be coordinated by IPGRI).
- IPGRI in consultation with FAO should consider reviewing the present MCPD (exchange format for *ex situ*) in the light of the upcoming sMTA under the ITPGRFA and, as appropriate, other fields being requested by the WGs.
- Improve linkage to the Global Crop Diversity Trust conservation strategies by using EURISCO, NIs and the respective ECCDBs (Annex I crops).
- New download functions of EURISCO to be implemented/improved.
- EPGRIS2:
  - If not approved, re-submit under the second call of EC Regulation 870/04
  - Seek funding for the following activities prioritized as follows:
    - Develop a generic approach to characterization and evaluation data to potentially be included into and as an extension of the *ex situ* exchange format
    - Taxonomic backbone (including ways to validate nomenclature and refer to synonyms) for EURISCO/NIs/ECCDBs
    - XML-schema in line with ongoing GBIF/BioCASE and to automatize/improve data flow between EURISCO and NIs/ECCDBs (case studies)
    - Capacity building for NFP/NI and ECCDB-managers
    - Crop portals of model crops as suggested (but then also developed) by the WGs
- IPGRI to investigate the potential establishment of Globally Unique Identifiers (GUIDs) for PGR as recommended by the last TDWG/GBIF (Taxonomic Databases Working Group/Global Biodiversity Information Facility) Workshop.
- Demonstration of EURISCO as a model to other regions.
- Continue collaboration with the *In situ* Network on the drafting of the EGRISI proposal.
- Training/meeting of selected NFP/NI in 2006/2007.
- D&I full Network meeting in 2007; possibly have it back-to-back with the start-up meeting of EPGRIS2 (if approved by the EC).
- NCG meeting in 2008, possibly with EURISCO Advisory Group (if funds available).

Proposals for Phase VIII (2009–2013)

- To improve quality and quantity of PGR data, with particular emphasis on quality;
- To improve functionality of EURISCO, NIs and ECCDBs and through this the use of European PGR;
- To improve international/inter-regional collaboration with international information activities/systems;
- To continue to strengthen national and institutional capacity in Europe in relation to D&I (*ex situ*, *in situ*, on-farm).

The revised budget for Phase VII and proposed budget for Phase VIII are included in Appendix II.

Discussion

K. Tobutt emphasized the need for experts in vegetatively propagated crops to get involved in the revision of the MCPDs. It was reiterated that this revision process will take place at the global level (FAO/IPGRI) and that it will need to be transparent and inclusive of all the different expertises.

C. Germeier stressed the importance of considering CropForge (a collaborative software development site, maintained by the biometric and bioinformatics unit of IRRI, providing

tools and a centralized workspace for developers to control and manage software development) in the activities of the D&I Network.

The high importance of improving communication between the NCG and ECCDB managers was acknowledged and reiterated.

Inter-regional Cooperation Network

Attending: Tiberio Chiari (Rapporteur), Ladislav Dotlačil, Lambert Visser, Jan Engels (observer)
Unable to attend: Vladimir Meglič, Eva Thörn (Network Coordinator)

Monitoring progress in Phase VII

In Phase VI, activities comprised three areas of cooperation, i.e. On-farm/*in situ* conservation of PGR, Documentation and information system development, and Policy implementation.

Two inter-regional workshops were run in 2003: Addis Ababa, Ethiopia, on policies; Cotonou, Benin, on information and documentation.

In Phase VII, considering the limited progress in the area of on-farm/*in situ* management, and the need to develop this area of work within the European region in the first place, it has been proposed to focus efforts towards documentation and information systems, and policy implementation (directly related to task sharing, and the establishment of the AEGIS project).

In addition, the issue of capacity building was indicated as a priority by other PGR networks.

During the Network Coordinating Group Meeting held in Ljubljana, April 2005, a revised workplan was adopted, comprising eight activities. These activities deal with inter-regional meetings, documentation, and capacity building (such as training of trainers and staff exchange).

The planned meeting of European national programmes in Belgrade earlier this year had to be postponed and it is in preparation later this year in Luxemburg with no ECP/GR funds. The participation of representatives from other regions in such an event could be considered.

Updated workplan for Phase VII

It is proposed that the meeting with regional network coordinators be co-organized with IPGRI and that it should include in its agenda the following topics: information exchange mechanisms, sharing of conservation responsibilities, capacity-building strategies and policies. Expected results are specific action plans for the identified areas, distribution of tasks and responsibilities amongst committed partners.

The meeting will offer the opportunity to discuss the training of trainers in documentation and in genebank techniques and management. Moreover, the opportunity offered for capacity building by projects such as the EU project on "Agro-fortification: networking on sustainable use of PGR" (Agro-Forte) will be used.

Considering the strategic role of the meeting, a reallocation of the remaining funds for the other activities is proposed.

Issues of common interest within the Network

Tiberio Chiari (from Istituto Agronomico per l'Oltremare - IAO, Florence, Italy) is a new member of the Network who replaces Marcello Broggio (IAO), who will be resident in Brazil for the coming months.

Issues of common interest across the Network

Training in documentation and information constitutes one of the main requests for assistance from other regional networks. Therefore, an increased involvement of the D&I Network is foreseen.

Suggestions for Phase VIII (2009-2013)

In order to enhance the collaboration between European partners and developing countries, the Inter-regional Cooperation Network could facilitate the identification of strategic areas for the preferential intervention of ECP/GR.

The Inter-regional Cooperation Network would act as a pro-active forum for the development of cooperation proposals between ECP/GR and other regions for submission to funding agencies such as EU and GEF.

The revised budget for Phase VII is included in Appendix II. The proposed budget for Phase VIII will be formulated in 2007.

Discussion

L. Frese explained that the World *Beta* Network (WBN) is an international forum and the need was expressed from other regions to see the establishment of crop genetic resources networks following the example of ECP/GR. A possible role of the Inter-regional Cooperation Network was envisaged.

J. Engels specified that the planned workshop of regional coordinators would work in the direction of strengthening the network's coordination role and suggested that the specific needs expressed by the WBN should be channelled to IPGRI in preparation for the workshop mentioned above.

N. Maxted stressed the importance of bidirectional flow of information from regions to Europe, specifically regarding the expertise that was developing in the establishment of genetic reserves, such as in the CWANA region.

Cereals Network

Attending: Iva Faberová, Christoph Germeier (Rapporteur), Marja Jalli, Andreas Katsiotis, Gert Kleijer

Unable to attend: Helmut Knüpffer (Network Coordinator)

Network-specific issues

Changes in positions

Iva Faberová replaced Annick Leblanc in the Network Coordinating Group. Marcin Zaczyński is the new database manager for rye, replacing Wiesław Podyma. Andreas Katsiotis has replaced Mike Leggett, who has retired, as the Chair of the *Avena* Working Group. Further changes within the structure of the Network are not planned.

Minor cereals

The issue of the minor cereals is unclear. Anna Michalová, who represented this topic had left the Czech genebank and the group. Dagmar Janovská has now been appointed to succeed Anna. It is proposed to invite her into the Network.

Progress within the Working Groups

Activity and progress are mainly reported within the Working Groups. Only the most important areas of progress are outlined, as follows:

- Databases and Web applications have been further developed in all cereal crops: a considerable expansion is seen in numbers of accessions in the Wheat Database. Data for *Aegilops* spp. within the European collections have been added to this database as well.
- A lot of characterization and evaluation data, resulting from EU projects, which have been completed, have been added into the Barley and Oat databases. These data are available on-line and downloadable from the respective Web pages.
- Additional evaluation descriptors have been agreed by the group and added to the Wheat Database.
- Contacts have been made with FAO for preparing a project on pre-breeding and broadening the genetic basis of breeding material within the barley genepool.
- Conservation facilities have been improved for the major wheat collections.
- A one-day *ad hoc* meeting with a limited number of scientists, to review the progress made and the workplan in rye and triticale genetic resources, is scheduled for September 2006.

Updating workplans

There were no significant changes in workplans and budget plans for Phase VII. Some activities were postponed (see Appendix II).

Cross-cutting items for the Networks

- Safety-duplication
- Cooperation of the CCDBs with EURISCO, GBIF and other international databases
- Quality of data and updates
- Harmonization of database structures
- Use of molecular markers
- Initiating EU and other international projects
- *In situ* and on-farm related topics such as designation of protected areas (e.g. *Aegilops* spp. in Israel, *Avena prostrata* in Spain)

Planning and prioritizing Phase VIII (2009-2013)

Implementation of AEGIS will be a priority task for Phase VIII. This implies that all the Cereal Working Groups will have the same priority. It is anticipated that the implementation of AEGIS will require one meeting of the Network Coordinating Group and at least two meetings for each Cereal Working Group. All of the above-mentioned cross-cutting activities, with the exception of *in situ*/on-farm related topics will be part of the AEGIS implementation. Specific AEGIS activities will be the designation of coordinating institutions for each cereal crop, the designation of the AEGIS accessions and the development of quality standards. The implementation of AEGIS will necessarily increase the whole ECP/GR budget.

The proposed budget for Phase VIII is included in Appendix II.

Participation in Global Crop Strategies

The Global Crop Diversity Trust is currently developing global conservation strategies for all five cereal crops (wheat, barley, oat, triticale and rye). Members of the Working Groups take part actively in these developments.

Discussion

K. Tobutt asked about the feasibility of harmonizing database structures.

C. Germeier replied that in his opinion the objective is not harmonizing structures, but undertaking a common modelling of genetic resources information and that CropForge is the ideal platform to set up open source software development.

L. Horváth raised the point of genetic resources of rice, considering their importance in a few countries in Europe and the existing risk of genetic erosion.

G. Kleijer reminded the group that it is always possible for specific interest groups to initiate activities within the Network.

Forages Network

Attending: Beat Boller (Network Coordinator), Lajos Horváth, Chris Kik, Petter Marum (Rapporteur), Valeria Negri, Magdalena Ševčíková, Evelin Willner

Workplan progress

Sharing of responsibilities

Identification of most original sample (MOS) and identification of primary holder

In the major databases between 80 and 100% of the accessions have an assigned "Originality". "Primary holder" is assigned for 0 to 72% of the accessions. Data for some databases are still missing.

There is still a lot of work to do to reach our final goal of sharing the responsibility of maintaining a European forage collection.

Some countries have extremely large collections. As a group we feel that we can contribute to go one step further to rationalizing large national collections and give advice on how to select the most appropriate accessions for long-term conservation.

There are communication problems with some DB managers. The NCG is considering suggesting new DB managers for those databases and/or to reduce the number of forage databases by merging several databases. To improve the contact with the DB managers, one idea might be to integrate them more into the activities of the WG.

Difficulties are encountered in completing the workplan on the identification of primary holders because some of the database managers find it difficult to do the job without extra funding (this is a problem for all). The Group will send a letter to some DB managers (National Coordinators) and ask if he/she is still able and interested in doing the job.

The harmonization of data structure of some of the CCDBs with the EURISCO data structure is still not completed and is a big problem. The method of data exchange must be improved.

Safety-duplication and regeneration standards

The table of capacities for hosting safety-duplication and the table of applied regeneration standards have been completed.

Medicago core collection project

It had been decided earlier to submit a project to EC 870/2004. The NCG expressed concern about the slow progress made in the preparation of the project. It was discussed whether a change in leadership of the project might be an appropriate solution to increase the chances of submitting the project to the second call, expected very soon in 2006. It was agreed to ask Jan Nedělník (RIFC, Troubsko, Czech Republic) if he was willing to provide substantial input, possibly as coordinator. Soon after the meeting, Jan Nedělník agreed to assume the role of project coordinator and to prepare the project in collaboration with Vladimir Meglič of the Agricultural Institute of Slovenia, Ljubljana.

Updating workplans

- The workplan was updated in 2005 and the NCG has focused on the sharing of responsibilities and we still see this as the major task for the remaining part of Phase VII.
- The Forages NCG encourages the "Global Crop Diversity Trust" also to start work on some of the many forage species included in Annex I. The NCG suggests starting work on *Medicago, Trifolium, Lolium* and *Phleum* as models for the other genera and is willing to participate in this work.
- Revise the preferred standards of regeneration based on new knowledge.

There were no significant changes in workplans and budget plans for Phase VII (see Appendix II).

Suggestions for planning of Phase VIII (2009-2013)

The Network consists of only the Forages WG.

- Carry out primary MOS identification of primary holders with the remaining forage CCDBs for inclusion in the European forages collection.

- Support genebanks in making proposals to assign AEGIS accessions.

- Produce a system for entering characterization and evaluation data in the forage CCDBs using the IPGRI common descriptor lists.

- Identification of European agricultural sites which harbour forage genetic resources. Carry out research to compare the genetic variation in European genebanks vs. the variation present in the above-mentioned agricultural systems. This may lead to the creation of a "core collection" of European grassland sites for in situ conservation.

- Raise public awareness of forage genetic resources, by the way of forage crop portals. The Working Group will identify members or institutes who are willing to host particular species.

- Support initiatives to investigate high throughput genotyping via SNP micro-arrays with the aim of identifying similar accessions in a more time-efficient way.

The proposed budget for Phase VIII is included in Appendix II.

Discussion
Interest was expressed in the initiative to establish a network of conservation sites with high *in situ* genetic diversity. The identification of the unit of diversity (either accession or population), in order to apply the concept of core collections at the *in situ* level, was considered an issue to be clarified.

Fruit Network

Attending: Emma-Jane Allen, Emilie Balsemin, Stein Harald Hjeltnes, Marc Lateur, Erika Maul, Robert Oger (observer), Jesus Maria Ortiz, Kenneth Tobutt (Network Coordinator, Rapporteur)

Monitoring progress

- Chairmen and Database Managers (DBM) presented progress reports. Excellent progress has been made by all Working Groups (WGs). By 15 April 2006 ECP/GR report forms will be completed.

Updated workplans

- We propose the four DBM should meet in 2007.
- It was recommended that the *Vitis* WG use its funds for the database to allow the adaptation to the EURISCO format and the incorporation of the Black Sea project data.
- *Malus/Pyrus* WG workplan will be revised during the WG meeting in November 2006. *Prunus* WG workplan was revised during the WG meeting in December 2005.
- *Malus* DBM will distribute annotated lists to the curators with suggested euonyms (agreed standard names chosen from among synonyms for database purposes) for members to supply any corrections at the meeting in November 2006. Global Crop Diversity Trust Global Strategy for apples should be discussed with the Global Strategy Coordinator at this meeting.
- The *Pyrus* database will adopt the EURISCO format.

Conclusions and recommendations of interest within the Network

- It was agreed that the four databases should be harmonized as much as possible, e.g. *Vitis, Malus* and *Pyrus* DBs will adopt the *Prunus* DB homepage as a model, DBMs will share modules with each other and will adopt common AEGIS descriptors which are being developed by the *Prunus* group.

Conclusions and recommendations of common interest across Networks

- It was agreed that euonyms will be added in the databases to aid solving synonym problems.
- Software developed at Gembloux for solving *Pyrus* synonym problems will be available for other ECCDB managers.
- Advice on incorporation of pedigree information into ECCDBs would be useful.
- The group recommends the use of standardized digital photographs with reference scales for developing photo galleries.
- The flow of information between curators, ECCDB, EURISCO and National Focal Points (NFPs) needs to be clarified.
- Clarifications of the EURISCO descriptors "Country of origin" and "Accession name" is essential.

- Regarding microsatellite markers used for characterization, we recommend consideration of the "*Vitis*-method" n+2, n+4, …. instead of 110, 112, …, for incorporating data in the database.

Suggestions for Phase VIII (2009-2013)

- All three WGs should be prioritized in Phase VIII, and an additional 18 000 euro will be required. *Ad hoc* meetings will allow for equal participation of the three groups.
- The *Prunus* Genetic Resources Newsletter will be expanded into a joint Fruit Genetic Resources Newsletter.
- At the moment vegetatively propagated crops are insufficiently represented in thematic Networks, e.g. Documentation and Information Network, *In Situ* and On-Farm Conservation Network. Therefore we recommend that these crops should be represented in the relevant Networks.
- Interaction with *Fragaria*, *Ribes* etc. genetic resources groups will be desirable and integration into ECP/GR should be considered.
- All WGs will seek to implement AEGIS and give priority to validation accessions of the ECCDBs by use of phenotypic, photographic and microsatellite descriptors.
- All WGs will try to incorporate into the ECCDBs data from other collections with which they are not currently in contact.
- *Malus/Pyrus* WG will develop better links between wild relatives and cultivars.

The revised budget for Phase VII is included in Appendix II. The proposed budget for Phase VIII will be formulated in 2007.

Discussion

Standardization of guidelines for displaying photographs on the Web was discussed as an ideal situation, for which technical solutions exist.[8] The types of solutions implemented by several European herbaria, which are displaying herbarium sheets on-line, will be worth studying.

Regarding the interpretation of the descriptor "Accession name", I. Faberová clarified that this is quite well defined and that no taxonomic information should be included there, even if the field remains empty.

It was recommended that any issue related to standardization of information be channelled to the Documentation and Information Network and that a process for problem discussion and resolution be created through an appropriate platform.

[8] H. Knüpffer informed that the EU project ENBI (European Network for Biodiversity Information), WP6, has published one of their deliverables as a book: *"Digital Imaging of Biological Type Specimens. A Manual of Best Practice. Results from a study of the European Network for Biodiversity Information"*. The book describes general subjects on digital imaging of biological objects, current approaches for different groups of organisms and a number of case studies. The book can be ordered as hardcopy from the ENBI bureau in Amsterdam (enbi@science.uva.nl) or from the authors in Stuttgart (chaeuser@gmx.de). From ENBI's Web platform, CIRCA, both the entire book (11.9 Mb) as well as the individual chapters can be downloaded.

Sugar, Starch and Fibre Crops Network

Attending: Lothar Frese (Network Coordinator, Rapporteur), Roel Hoekstra
Unable to attend: Andrea Carboni, Bruno Desprez, Martin Pavelek

Network-specific issues

The Sugar, Starch and Fibre Crops Network (SS&F) encompasses crops with few agronomic or biological features in common. Hence our major joint interests are data documentation issues, and extensive knowledge in this field is available as we have been managing CCDBs for *Beta* and Potato for two decades. The Working Groups reported progress as follows:

Beta Working Group

- Regeneration guidelines were compiled by all collection curators (as part of the quality management concept);
- GIS (Geographical Information System) tool was implemented in the IDBB (International Database for *Beta*) to visualize geographic distribution of species or distribution of traits;
- Good progress was achieved in the development of *in situ* management concepts.

Potato Working Group

- European **cultivated potatoe**s: the Web site was completely renewed and a tool for password-protected data input by contributors via the Web is being developed by SASA (Scottish Agricultural Science Agency) which should be available by September 2006;
- European **wild potatoes** (including Andean landraces): good progress was made in updating passport data (e.g. VIR);
- Good progress was achieved in assembling MAS (Most Appropriate Samples) list to be proposed to curators of the collections.

Fibre crops

- A Working Group for Flax and Hemp was established;
- Updating of the descriptor list for flax is in progress;
- Some progress in the Flax Database management (passport data and some characterization data by the Czech partner, evaluation data by the Slovak partner) was achieved and is quantified in the project proposal mentioned below.

Network-related progress

During the NCG database managers meeting (July 2005, Braunschweig, Germany) it was decided to write a project proposal to be submitted to the Steering Committee. The Czech partner with involvement of all NCG database managers elaborated the proposal "Development of a reference implementation for access to and management of a Central Crop Database (*Linum* spp.) based on open source Internet technology".[9] The major aim of the project consists in the improvement of the existing flax database operated by the Czech partner on the basis of the generic data model developed and successfully applied for *Beta* and *Avena*. The project can be considered as a case study hopefully leading to a broader application of the generic data model.

[9] Project proposal available on the Internet (http://www.ecpgr.cgiar.org/SteeringCommittee/SC10/StandRep/IFDB-pp.pdf)

Updating workplan

- Potato WG meeting postponed to late 2006. It is planned to demonstrate the new Web site and software tools for uploading data to the participants.
- Participation in the Global Crop Diversity Trust programme. The ECP/GR Network should be involved in the development of crop conservation strategies for potato and *Beta* and the follow-up process.

Workplan for the rest of Phase VII

All crops

All crop representatives considered updating of the CCDBs, in particular characterization and evaluation data, as a major need. EURISCO was seen as an additional passport data source.

Beta

The report of the *Beta* Working Group was more detailed as the Working Group had just met from 8-11 March, 2006 in Spain. The task- and responsibility-sharing issue is on hold until the end of the AEGIS feasibility study. The Group decided to designate target populations for *in situ* management (ISM) based on the rather detailed knowledge compiled during the meeting on suitable sites. The group identified the need for species-specific *Beta* descriptors for *in situ* data and a database module suited to document *Beta*-specific *in situ* data. The Working Group suggested organizing an *ad hoc* technical meeting to prepare this descriptor list and to discuss a data model for the new module including basic concepts for data exchange between national inventories, the IDBB and other relevant information systems. A baseline of genetic diversity for designated ISM target populations can be developed using input in kind from a breeding company carrying out genetic characterization.

Potato

The Working Group plans the inclusion of passport data of several collections (e.g. East European countries) that have not yet been included in the database.

Flax

Since the project applicant AGRITEC agreed to provide considerable input in kind to the proposed flax database project, this will be the major activity.

Synergies and common features

Uploading mechanisms for characterization and evaluation data are required by all NCG databases and will be a matter of future discussion. Also in future synergies will mainly be generated through cooperation in the field of documentation. It is therefore proposed to invite the Flax and *Beta* CCDB managers to attend the potato meeting in late 2006.

Budget

Potato (currently lower priority)

The Potato Working Group will spend the budget for the meeting to be held late 2006 and for small cooperative projects to be discussed by the Working Group such as the preparation of VIR data by a VIR expert for uploading into the Potato Databases.

The participation of the Flax and *Beta* DB managers in that meeting can be funded from the remaining budget of the *Beta* and Flax Working Groups.

Ad hoc technical meetings

The remaining budget will also be spent for small *ad hoc* meetings required to develop crop-specific ISM descriptors, the ISM data model. To facilitate the interaction between the thematic networks and the crop-specific networks, the SS&F Crop NCG plans to invite and fund the representatives of the thematic Networks from its own remaining budget.

Suggestions for Phase VIII (2009-2013)

All Working Groups should give equal priority to all WGs in future and share the budget according to needs. The NCG stressed that in particular the well-established older WGs with detailed workplans would prefer to spend a significant part of the budget for actions rather than for just another meeting. The slow work progress is often due to lack of staff and as can be seen from the Flax Database proposal, considerable work progress may be achieved if a part of the budget is invested in a suitable manner. The Network Coordinating Group suggests the following meetings and actions:

Working group meetings including publication of reports

- *Beta*
- Potato
- Flax and Hemp combined with NCG meeting

Ad hoc meetings on various issues

Three working groups

Actions

- *Beta*: Uploading of C&E data from VIR, and other collections. We would like to apply for a small ECP/GR project such as we had in the past for garden beet evaluation with the Czech Republic, Poland and Russia:
- *Beta*: Monitoring of genetic reserves (Beta). Travel cost reimbursement for local experts.
- Preparation of MAS of Garden and Leaf Beet accession suitable as conservation varieties, perhaps in cooperation with the vegetable network or with NGOs. Funded as small ECP/GR project.
- Preparation of MAS for obsolete potato varieties suitable as conservation varieties (Genetic fingerprinting: 5000 euro, virus eradication: 10000 euro). Specific priorities will be determined at the WG meeting, perhaps in co-operation with NGOs. The work could be advertised within the ECP/GR to make the best possible use of the available funds.

The revised budget for Phase VII and proposed budget for Phase VIII are included in Appendix II.

General suggestions

The NCG recognizes the need for improved cooperation, information exchange and knowledge transfer between crop-specific working groups and thematic networks.

The 60 CCDBs provided by institutions as input in kind to the whole ECP/GR system, are essential elements of the ECP/GR. They were developed virtually without significant project funding during the past two decades. In view of the emerging central information systems the CCDB managers need a clear perspective for their future work and role in a network of national and European information systems. The position of CCDB managers should be defined by a clear assignment of functions, tasks and facilities through national or European authorities, which may not necessarily mean additional funding since the goal may also be achieved by slight organizational rearrangements which will give genetic resources work a

higher priority. A clear commitment by decision-makers interested to establish an efficient and effective European genetic resources programme following the principles laid out by the AEGIS strategy may suffice.

Past experiences have shown that some milestones set by working groups can easily be achieved through small amounts of money for targeted actions. Older working groups in particular have less need to meet and discuss workplans; rather, they need additional staff capacity to suit the action to the word. For that very reason the NCG has submitted the flax proposal and is suggesting various actions for Phase VIII. As the EU regulation 870/2004 will probably not be continued there is a clear need for a funding mechanism which will allow working groups to really progress with their work.

Discussion

Following the proposal from the Network to reduce the number of meetings and dedicate more funds to activities, F. Begemann asked the meeting whether this could be considered a generalized need and what would be the right balance between funds spent for meetings or actions.

D. Astley replied that, in the case of the Vegetables, Medicinal and Aromatic Plants Network, there was agreement that it is important to have meetings to keep continuity of the WGs, but small injections of funds for activities can be very effective.

A. Katsiotis enquired whether it could be appropriate to consider activities on cotton genetic resources, considering that this crop is important in Greece and Turkey. The meeting took note of this proposal.

Vegetables, Medicinal and Aromatic Plants Network

Attending: Dave Astley (Network Coordinator, Rapporteur), Dea Baričevič, Ietje Boukema, Marie-Christine Daunay, Maria José Díez Niclós, Willem van Dooijeweert, Joachim Keller

The VEGMAP Network involves seven Working Groups: *Allium, Brassica*, Cucurbits, Leafy Vegetables, Medicinal and Aromatic Plants, Solanaceae, and Umbellifer Crops.

Structure of the VEGMAP NCG

Grégoire Thomas resigned as Coordinator of the NCG and Eduardo Rosa resigned as the *Brassica* Working Group representative. Dave Astley agreed to take over the function of the NCG Coordinator until the Full Network Meeting in June 2007.

There was no representative of the *Brassica* WG in the NCG meeting. The *Brassica* report was presented on the basis of information supplied by Eduardo Rosa and Noortje Bas.

Network-specific issues

i. This was the first meeting of the VEGMAPNET Coordinating Group since the Steering Committee included the MAP Working Group in VEGNET without consultation. The members of the Network Coordinating Group presented their reports on the achievements of the Working Groups. It was immediately apparent that the MAP Working Group has a different basis, workplan and objectives to the crop-based vegetable Working Groups. The members of the VEGMAPNET all agree that the MAP WG and the vegetable WGs would be better served by reversing the Steering Committee decision and removing the MAP WG to re-establish the Vegetable Network. Dr Dea Baričevič, Chair of the MAP WG was in full agreement with this recommendation. The

MAP WG deals with >400 wild taxa as potential sources of medicinal and/or aromatic products and as such will benefit from collaborative support from the *In-situ* and On-farm Network. We believe that the MAP WG requirements for the development of their practical, strategic and policy activities will best be served by incorporation in another crop-based network.

ii. Based on recent surveys, all WGs recognize that safety-duplication is still a significant problem. We recommend that the members of the SC promote the essential nature of safety-duplication within their national programmes in order to safeguard their national collections and the broader international genepool.

iii. Working Group members are appointed by national programmes. But the Working Groups find that some nominees are not always competent in the crop or plant genetic resources of the WG or may lack a sufficient level of language understanding. In addition, regular changes in national representation on Working Groups make the continuity of the workplans extremely difficult. National PGR Coordinators should be aware of the need for competence in their delegates for specific Working Groups and the benefits that accrue from the continuity of the membership within the Working Groups.

iv. A new GENRES Project focused on vegetatively propagated *Allium* will be submitted by the *Allium* WG to the 2nd call of EC Regulation 870/2004. The project proposes the use and integration of biotechnological tools (molecular markers and cryopreservation) in the rationalization of the material to create well-defined cryopreserved European collections.

v. While searching the European databases, the Working Group members observed an increasing level of inaccuracy in taxonomic names with respect to spelling and synonymy. A higher level of accuracy and validation is required in European databases and this can only be achieved by regular input from taxonomic specialists. The NCG recognizes that the EPGRIS2 project proposal has a taxonomy validation component and looks forward to the implementation of such a system.

vi. The VEGMAP NCG highlighted five areas of interest, namely ecogeographical surveys, gap analysis, strategy development for *in situ* conservation, landrace surveys and technical clarifications, for collaboration with the *In-situ* and On-Farm Network. The NCG supports the proposal to develop a new project proposal for the 2nd call of 870/2004 for the integrated approach to European conservation implementing genetic reserve and on-farm concepts including *Brassica* and MAP work programmes.

vii. The NCG noted that the new Working Groups (Cucurbits, Leafy Vegetable and Vegetable Solanaceae) have shown very good progress in achieving their workplans particularly for documentation, development of descriptors, etc. But the older Working groups (*Allium* and *Brassica*) exhibited signs of having reached saturation point where further development has been limited by the lack of financial inputs. However, it was noted positively that workplan development has been revitalized for the *Allium* and the *Brassica* groups by AEGIS, but the financial limitation is still the major constraint to progress.

viii. The Medicinal and Aromatic Plant Working Group will organize the 4th Symposium of Breeding research on MAPs with special reference to Conservation Strategies in Slovenia at the end of September 2008. The MAP Working Group will meet in the 2nd half of Phase VII and may run in tandem with the international symposium.

ix. The VEGMAP NCG agreed to discuss and formulate a budget for Phase VIII at the Full Network meeting in June 2007. The delay was justified because we await clarifications

on GENRES projects and on the structure of the VEGMAP Network highlighted above, both of which have consequences for budget development.

Recommendations for Phase VIII (2009-2013)

1. All Network Working Groups need funds to drive their work and the NCG recognized that the WGs have benefited tremendously from involvement in GENRES projects. However, it was also recognized that the time and effort required to develop a GENRES proposal are out of proportion to the rewards received. The VEGMAP NCG would like to see stronger interactions between the ECP/GR Secretariat, the ECP/GR Steering Committee and the various divisions of the European Commission to promote genetic resources in Framework Programmes and to link more directly into the development of GENRES programmes at a political level through the European Parliament and national programmes holding the Presidency of the EU.
2. The VEGMAPNET proposes that the Steering Committee consider the development of a new thematic group for cryopreservation including the under-pinning requirement for *in vitro* work (phytosanitation by meristem culture). In considering the high labour and cost requirements for the field maintenance of vegetatively propagated germplasm (potato, fruit crops, garlic and shallot, MAP species like mint) cross-cutting initiatives should be used to support information exchange to promote the technical developments between these crop groups. There are significant advantages for groups which are developing protocols for crops previously not stored in cryopreservation to benefit from links with specialist groups. In addition, taking account of the investment required to establish cryo facilities, in terms of equipment and training, and the economies of scale to be achieved, it is essential to promote the use of centres of technical excellence for the cryopreservation of multiple crops.
3. The members of the NCG were encouraged by the results reported from the AEGIS project and are keen to recommend the implementation of the various technical aspects of AEGIS as far as they can be applied to the different WGs within the VEGMAP Network (e.g. the definition of Most Original Accession/Most Appropriate Accession).
4. The NCG was divided on the question of prioritizing Working Groups within the Network. All six vegetable Working Group representatives felt strongly that there is no benefit to such a priority ranking between the Vegetable Working Groups, while the MAP representative was wholly in favour of prioritizing groups within the Network.

The status of the budget for Phase VII is included in Appendix II. The proposed budget for Phase VIII will be formulated in 2007.

Discussion

A question was asked about safety-duplication, enquiring whether the insufficient implementation is due to lack of capacity or other reasons.

D. Astley replied that generally the problem consists in lack of implementation at the national level, following the agreement reached during the WG meeting. This problem is sometimes related to the insufficient delegation of governmental authority assigned to the WG members participating in the meetings.

The case of the MAP WG and its most suitable allocation to a given Network was debated. It was concluded that any suggestion to split the VEGMAP Network should be accompanied by a clear justification.

PART III. RECOMMENDATIONS AND CONCLUSIONS

Recommendations from the NCG meeting to the ECP/GR Steering Committee

Chair of the afternoon session: Gert Kleijer

Based on the wrap-up of the Networks' cross-cutting issues discussed throughout the meeting, a set of operational and strategic recommendations to be presented to the ECP/GR Steering Committee was drafted. These recommendations were discussed at the closing session and endorsed with a few modifications, as below:

AEGIS

The meeting acknowledged a broad appreciation by the networks of the concept of AEGIS as outlined in the Strategy Framework Paper, and the application of AEGIS in order to create European Crop Collections. It also recognized its impact on the stimulation of several WGs (i.e. *Allium* and *Brassica*).

The meeting recommends to the Steering Committee to support the broad implementation of AEGIS, especially including the need to accept obligations related to the national programmes.

Global Conservation System

It was noted that several global initiatives on PGR conservation are ongoing (Convention on Biological Diversity, Global Crop Diversity Trust, International Treaty, Global Plant Conservation Strategy). It was considered important that ECP/GR continues to support these processes by making i.e. its knowledge, germplasm, training and capacity building available in this global context. In this context, AEGIS could be seen as a model contribution.

Efficiency in conservation, documentation and facilitated use of PGR

The Networks reported some progress in improvement of quality and quantity of information and management of resources. However, agreement was reached to prioritize in the future on quality (i.e. quality vs. quantity of data, focus on characterization and evaluation data). Improvements in sharing of responsibilities in cryopreservation, *in vitro* infrastructure, as well as *in situ* and on-farm conservation areas (for instance through survey of present status) should be considered.

Increase inter-regional cooperation (Europe with other regions)

The value of cooperation was recognized as being reciprocal. The meeting encourages reinforced inter-network relationships, as well as strengthening inter-relations with national and international development agencies.

Role of EURISCO as a central platform of ex situ, in situ *and on-farm data*

The participants recognized the increasing key role of Documentation and Information in conservation and utilization of PGR. In this respect EURISCO was appreciated as a central platform, which in future will cover *ex situ, in situ* and on-farm data on PGR.

EURISCO, the NI/NFPs and the CCDBs are at the centre of the process. Their relationship needs to be clarified and the conditions for the functioning of the CCDBs need to be strengthened.

Implications of the International Treaty

The meeting took note of the upcoming meeting of the Governing Body of the ITPGRFA and was informed of the possible implications at the international level, i.e. the sMTA. The Steering Committee was requested to investigate further implications at the international level for national programmes (designation of accessions to the MLS, data structures, use of MTAs and their documentation).

Strengthening efficiency of national programmes

While progress was noted for most of the networks and WGs, the level of activities has developed very differently. This difference is partly due to insufficient levels of inputs and participation by individual national programmes. It is recommended that the National Coordinators assess the selection process for country representatives in the various activities and enable their operation at the ECP/GR level.

Coverage of crops

After the last SC meeting the coverage of crops was expanded and positive experience was reported from the Networks. However, additional proposals came up from the Networks to further broaden the coverage of crops to be taken care by ECP/GR (e.g. rice, cotton, currant, strawberry, minor cereals). It is recommended that the Steering Committee consider such a broadening process and presents clear guidance to the Networks on this matter.

Budget implications

The meeting is aware that ECP/GR used to work on the basis of strong inputs-in-kind by national programmes by means of providing a platform to exploit synergies among these, i.e. working through improved coordination, communication, meetings, training, PR activities. It was noted that ECP/GR provided substantial input into the preparation of projects that had been funded by external sources such the EU GEN RES programmes. However, such external funding is not sustainable and the above-mentioned tasks raise concern due to the limitations of the present ECP/GR budget. It is therefore suggested that the SC should not only consider maintaining the present budget line, but also consider an increase along the priorities outlined above, for Phase VIII.

The past experience of ECP/GR showed that besides funding meetings, a certain amount of funds need to be reserved to targeted *ad hoc* actions. Attention to a fund-raising role is also recommended.

ECP/GR and EU relationship

The meeting noted that the current and future EU legislation has an increasing impact on ECP/GR activities. It is therefore suggested that communication between ECP/GR and the relevant European Commission services be improved (AGRI, Environment, SANCO and RESEARCH being the most important ones).

Steering Committee members are encouraged to facilitate this process via their national inter-department links.

APPENDICES

Appendix I. Report of the ECP/GR Oil and Protein Crops Network Coordinating Group Meeting, 16-17 May 2006, Paris

Attending members: Mike Ambrose (Chair), Gérard Duc, Sijka Angelova, Maria José Suso (co-opted for meeting for specific expertise).

1. Network Coordinating Group discussion

The Working Group on Grain Legumes (WGGL) remains the only operative Working Group in this Network although new initiatives from other potential groups relevant to the coverage of the network would be welcome. The members of the Network Coordinating Group (NCG) had been unable to attend the meeting of all ECP/GR NCGs in Bonn at the end of March so this meeting was organized to address issues raised at that meeting. The discussion therefore focused on the operation, workplan, budget and future workplans for the WGGL.

1.1. Current workplan

The workplan proposed at the end of the 3rd meeting of the WGGL was considered realistic and achievable with the resources available within the Group.

- **Sharing of information about general genebank practices with special reference to regeneration procedures**

A task force of WGGL members had worked effectively and efficiently in planning and collating information concerning the regeneration protocols for grain legume (GL) species. This developed into an on-line consultation on the conservation, management and regeneration of grain legume genetic resources hosted by the ECP/GR secretariat and IPGRI Web site in the first part of 2005. The NCG expressed their appreciation to task force members and those associated with ECP/GR secretariat in their contributions to making this a useful and successful operation. Preliminary analysis of the findings had been undertaken at IPGRI. The targeted mailing to encourage contributions to the on-line exercise was viewed as very successful, resulting as it had in submissions from 23 countries. It was evident that there was interest in the issues raised and awareness was generated across the whole of the GL community and not just restricted to Europe.

- **Sharing of germplasm for molecular diversity studies**

As outlined in section 4.1, an extended set of some 1900 *Pisum* accessions have been sourced from WGGL members. DNA samples have been prepared and the resulting data will be used to address questions of the structure of diversity held in European collections, putative duplicates and the "most original sample" concept. This was viewed as a very successful action on behalf of the WGGL in collaboration and delivery into a large research initiative.

- **Organization of a short workshop on regeneration of allogamous GL species**

The meeting was held in Valladolid, Spain, over 22-23 September 2005 and was attended by 26 people including a number of experts and interested parties from other regions including North Africa, Canada, Syria (ICARDA, International Center for Agricultural Research in the Dry Areas, Aleppo) and Mexico (CIMMYT, Centro Internacional de Mejoramiento de Maíz y Trigo, Mexico). A report of the meeting and slides of the talks were posted on the ECP/GR Web site within a few weeks of the meeting. Reports of the meeting were published in 2005 in the IPGRI Newsletter for Europe (31:5), and in 2006 in Grain Legumes (45:6) and in the Spanish magazine Agricultura (882:136-137). The meeting was deemed very successful in disseminating the work of the on-line survey and in helping to identify remaining gaps.

Important interactions and networking were achieved in the out-of-session periods that will be taken forward in the work of the WGGL.

- **Monitor and collate cases of on-farm conservation of GLs**

This point had been covered as part of the on-line consultation exercise conducted in 2005. Sijka Angelova outlined particular cases that she was involved with in Bulgaria, and others that she was aware of in the region. She offered to contact other WGGL members and collate the findings into a short report this summer.

- **Documentation and information**

While progress in this area has been achieved, the efforts were still rather fragmented. In the absence of a current summary, the NCG decided that a review of the current status of the Central Crop Databases (CCDBs) relating to GL was needed urgently to feed the planning for Phase VIII.

- **Full meeting of the WGGL 2007**

A formal approach had been made in February to the organizers of the AEP Grain Legume Conference (Lisbon, Nov. 2007) for a session on genetic resources. During past conferences, this workshop had been well supported and a similar event during the 2007 conference would also be scheduled. The NCG agreed that scheduling a full meeting of the WGGL in the days immediately prior to the AEP conference was a good way of ensuring that the group had the additional opportunity to interact with a wide group of users of GL genetic resources. Tentative dates for the 4th WGGL meeting were fixed for 9-10 November 2007.

1.2. Budget

The budget requested in Phase VII for the short *ad hoc* meeting and a full meeting of the WGGL were still considered appropriate by the NCG and no further requests were noted.

1.3. Discussion of issues arising from the Bonn meeting

The NCG regretted that representation of the Oil and Protein Network Coordinating Group had not been possible at the Bonn meeting. The NCG expressed their thanks to the ECP/GR Secretariat for all the pre-meeting papers and for making available a draft of the parallel sessions dealing with network-specific issues and the recommendations and conclusions of the meeting.

- **AEGIS**

The NCG noted the important work undertaken within this project and the stimulation to those WGs currently engaged in the project. The development of the framework was supported in outline but there was a strong feeling from within the Group that the strength of ECP/GR was its inclusivity. There may be were dangers that a two-tier system may start to develop which could be divisive if it calls for obligations that may not be readily met across member countries.

- **EURISCO**

The NCG supported the developments that had been ongoing within the Documentation and Information Network during Phase VII. Difficulties were envisaged in extending the coverage of EURISCO to cover *in situ* resources but the aim of integration within a single system was desirable and should be pursued. The current difficulties with the system were known to the Group and would no doubt be resolved in the near future. The NCG supported the continuation of effort in relation to CCDBs and their associated expertise.

- **Increase inter-regional cooperation**

The NCG strongly supported this point and is actively engaged in initiatives that are contributing to this effort (see 4).

1.4. Promotion and profile raising of the WGGL

The NCG discussed activities relating to raising awareness of the existence and work of the WGGL. It was felt that the short articles written following meetings and published in the IPGRI Newsletter for Europe and the AEP journal Grain Legumes were well placed for their target audience. These and mention of the WGGL in talks would be collated for the mid-term report to the Steering Committee. It was felt that more could be made of the WGGL Web page in terms of links to relevant initiatives with which the Group was associated, such as the EU Grain Legumes Genetic Improvement Programme. These links should be reciprocal. Mike Ambrose undertook to deal with these.

Maria José Suso mentioned that there was a forthcoming meeting relating to the International Treaty to be held in Madrid next month and she undertook to approach the organizers to see whether it would be possible to provide information on the work of the WGGL at the meeting.

1.5. Future workplans

A discussion on future workplans took the form of a brainstorming session on issues and initiatives that will help shape future discussions within the Group and the future work plans of the WGGL. The discussion is summarized as a series of bullet points.

- **Evaluation of regeneration methods (Priority action. See 2.)**
  - *Ex situ*/on-farm complementation
    - Pooled populations
    - Use of male sterility
    - Role of floral structure
  - Development of lists of new characters and associated descriptors

- **Integration of informatics (Priority action)**
  - Facilitate and monitor database projects which feature GL germplasm as an integral feature
  - Broker communication between IPIS, GERMINATE and SIREGAL to ensure complementarity between systems and approaches and EURISCO
  - Recommend a better profile should be given to recombinant inbred populations, mutant collections within CCDBs and EURISCO

- **New characterization (new traits)**
  - Climate change. Adaptive traits, drought, freezing, heat
  - Interaction with pollinators
  - Screening for *Aphanomyces* resistance in *Pisum*
  - Resistance/tolerance to aphids and bruchids
  - Bioenergy. Biomass and starch production, N use and water use efficiency

- **Further characterization (classical traits)**
  - Lodging in *Pisum*. Easy to score and therefore should result in a high level of participation across the community. Scored high on breeders' priority list. Need to agree on descriptor states.
  - Seed quality
  - *Orobanche* resistance

- **Phenotyping of core collection (see 4.3. M. Ambrose to coordinate)**

- **DNA collections (Priority action. G. Duc to coordinate)**
  - Collate capacity across the WGGL/methodologies
  - Current programmes for *Pisum* and *Vicia*. What of the others?

- **Adaptation to new crop management systems**
  - Intercropping
  - Low input systems
  - Participatory breeding (on-farm conservation)

2. Ad hoc *Meeting on the conservation, management and regeneration of GL genetic resources*

The discussion focused on the follow-up actions listed at the end of the report of the Valladolid meeting. It was still considered important to continue with the agreed targets. Maria José Suso would contact ECP/GR to request assistance with the cross-tabulation of the results of all the returned information from the on-line survey. This had not been available at the time of the meeting. Once this had been done, it was agreed that a publication would be written based on the results to raise the profile and significance of the findings. It was agreed that we should aim for publication of the work in GRACE in the first instance.

The production of revised guidelines for regeneration protocols that addressed the findings of the meeting for more species-specific and practical information where it was available should be progressed this year so as to maintain momentum. The NCG was of the view that these could be developed as a Web document with the entry level being the species. A common structure to all entries would aid clarity. As a Web document it would also be easy to update and revise as new data became available.

A strong theme at the meeting in Valladolid had been the increase in complementarity between *in situ* and on-farm conservation for allogamous GL species. This is an area that clearly links to the *In situ* and On-farm Conservation Thematic Network and the NCG was of the view that it would be a worthwhile exercise to develop a small exemplar project to go forward to the Steering Committee for one-off funding. Maria José Suso undertook to draft a short preliminary project outline for discussion by the NCG prior to communicating with the ECP/GR Secretariat as to its suitability prior to its submission to the Steering Committee.

3. EU GENRES 870/2004

The NCG discussed the possibility of developing a proposal focused on grain legumes for submission to the 2nd call for proposals. The general view was that none of us were in a position to coordinate such a proposal due to either time constraints or lack of institutional stability and that grain legumes were too narrow a framework for such a proposal. It was noted that activities within the Group were reflected in a range of funded initiatives that linked the resources into ongoing research projects. These represented a wiser investment of time and resources than regulation 870/2004 for the WGGL at the present time.

4. Grain Legume initiatives

4.1. EU Grain Legume Integrated Project (GLIP)

Mike Ambrose has been involved with coordinating WGGL members in providing *Pisum* germplasm to the EU Grain Legume Integrated Project. DNA samples derived from single plants from each accession have been prepared and will be used in diversity screening using a set of 70 molecular markers anchored to the genetic map. The data generated will be made available to those who submitted material and will be made public at the end of the project. Contributions from seven European collections had resulted in 1900 accessions being made available. DNA samples had been completed in April of this year. Marker work was not due for completion until into 2007. This has been a valuable contribution to the project and a good example of contributing to one of the four ECP/GR Phase VII priorities.

4.2. Global Challenge: *Vicia faba* molecular characterisation

Gérard Duc outlined a project coordinated at ICARDA that would result in 50 SNP markers being scored across 1000 *Vicia faba* accessions selected for maximum diversity from the collections held in Spain, France and ICARDA. This was a one-year project and would result in the formation of a core collection for *Vicia.*

4.3. *Pisum* germplasm resources international consortium (PeaGRIC)

Mike Ambrose reported in a meeting held at the John Innes Centre in Norwich. This meeting brought together key players from ICARDA, USDA-ARS and ATFCC-AUS to discuss the formation of an International consortium for *Pisum* germplasm resources. This was instigated to address a need, in the absence of a CGIAR centre with a mandate for *Pisum.* The consortium would be open to all those with resources who wished to participate and would focus on coordinating input into the growing number of GL research projects internationally and ensuring greater integration in the area of informatics development linked to GL resources. One of the main priorities initially would be to raise the issue of developing an international core collection for *Pisum* out of the various core collection initiatives that have already been developed. A draft document of the consortium would be circulated publicly during the summer of 2006.

5. Interaction with EU GLIP Technology Transfer Platform (TTP)

The NCG were grateful to Gérard Duc for organizing a session with Catherine Goldstein who is the manager of the TTP to discuss communication and interactions. While the EU GLIP project is primarily Europe-based, the TTP is aiming at the international GL community. Germplasm and data generated within the EU GLIP project is one of the key outputs for researchers and breeders. This already utilizes contributions made by WGGL members. The delivery of outputs is an area where the WGGL could usefully have input and be promoted. It was agreed that the TTP Web site will host a link to the WGGL Web page and WGGL would aim to reciprocate this arrangement as part of its devised Web page. The discussion was very much on the need for two-way dialogue between TTP and the WGGL and Catherine would outline information relating to genetic resources where the WGGL could assist.

Budget for Phase VII is presented in Appendix II. The proposed budget for Phase VIII will be formulated in 2007.

Appendix II. Networks' Budgets

Budgets for Phase VII

Proposed budgets for Phase VIII

In situ and On-farm Conservation Network – Status of expenditures as of March 2006

(N.B. The NCG plans to revise the budget at a later date)

Euro 42 353 + Euro 13 959 (Phase VI) + Euro 10 400 (cross-cutting issues budget) = Euro 66 712

Date	Activity	Budget (euro)	Expenses (euro)		Balance Phase VII
			Expenditures 2004	Expenditures 2005	
Wild Species Conservation in Genetic Reserves Task Force					
	50% publication cost [1] of "Genetic Reserve Management" in IPGRI Technical Bulletin series	1750	0	0	1750
Sep. 05	5 PGR NGO representatives to attend Crop Wild Relative Conference [2]	4500	0	4500	0
Sep. 05	2 Protected areas management representatives to attend Crop Wild Relative Conference	1500	0	1500	0
Sep. 05	2 Botanic garden representatives to attend Crop Wild Relative Conference	1500	0	1500	0
2006, 2007, 2008	Production costs of "Crop Wild Relative" x 3 [3]	6000			6000
Sep. 07	50% cost [4] of Genetic reserve subgroup meeting 1	5000			5000
On-farm Conservation and Management Task Force					0
June 05	Home garden / on-farm conservation definition meeting [5]	7500	0	0	7500
June 06	On-farm meeting 1	11000	0	0	11000
Sep. 07	On-farm meeting 2	12600	0	0	12600
	Publication cost of "European landrace conservation" in IPGRI Technical Bulletin series	5000	0	0	5000
Thematic cross-cutting issues					0
Sep. 05	6 PGR genebank representatives to attend Crop Wild Relative Conference	5400	0	3503	1897
	NGO and PGR networking meeting [6]	5000	0	0	5000
	Total	**66750** [7]	**0**	**11003**	**55747**

[1] The other 50% will come from PGR Forum.

[2] The Crop Wild Relative Conference will be the final dissemination conference for PGR Forum and will open to non-PGR Forum members.

[3] The first five editions of "Crop Wild Relative" will be funded by PGR Forum.

[4] It is assumed that the remaining 50% will come from wild species conservation grants.

[5] The objective of this meeting would be to get a small subset of experts together to discuss the relationship, similarities and differences between home garden and on-farm.

[6] As suggested by Béla Bartha. This meeting would have the objective of improving inter-NGO collaboration, share conservation activities and technical expertise. It will also be used to stimulate the establishment of an association of European PGRFA NGOs and through ECP/GR enhance technology transfer from the more formal European PGRFA community.

[7] This is made up of a budget for 2004-2008 of 42 353 euro, plus the remaining Network operation funds from Phase VI of 9792 euro (US$11 750) for *In situ*/On-farm Task Force meetings and 4167 euro (US$5000) for the NGO meeting. Euro 10 400 are requested from the thematic cross-cutting budget.

Documentation and Information Network – Revised budget for Phase VII and status of expenditures as of March 2006

Euro 42 353 + Euro 50 000 (EURISCO Budget)

Date	Activity	ECP/GR contribution (euro)	Expenses (euro)		Balance Phase VII
			Expenditures 2004	Expenditures 2005	
Part A: Meetings					
(Such meetings should ideally be organized "back-to-back" with other meetings in such a way as to exploit maximum synergies)					
2004-2005	Meetings of EURISCO Advisory Group & NCG	5976	1247	4729	0
2006 or 2007	Training/meeting of National Inventory Focal Points (NFP/NI); (on a self-financing basis; limited support upon request if justified)	5000	0	0	5000
2007	Full Network Meeting (NFP/NI, ECCDB managers, EURISCO Advisory Group); (possibly back-to-back with EPGRIS2 and seeking additional funding as far as possible)	10000	0	0	10000
2008	NCG Meeting (perhaps together with EURISCO Advisory Group, depending on available funds)	6377	0	0	6377
Part B: Projects					
	Limited support to highly-relevant D&I Network-related activities upon request and in selected cases to be approved by the D&I Network coordinating group	15000	0	0	15000
	Total	**42353**	1247	4729	36377
	Part C: EURISCO				
Future maintenance and selected development activities to be funded through specific ECP/GR budget line "EURISCO"		**50000**	9744	0	40256

Inter-regional Cooperation Network – Revised budget for Phase VII and status of expenditures as of March 2006

Euro 21 177

Date	Activity	ECP/GR contribution (euro)	Expenses (euro)		Balance Phase VII
			Expenditures 2004	Expenditures 2005	
March 2005	Meeting of the Network Coordinating Group	2378	0	2378	0
Nov. 2006	Invitation of key persons to European workshop in Luxemburg	2000			2000
First half of 2007	Meeting between regional network coordinators co-organised with IPGRI	13000	0	0	13000
2007	Meeting of the Network Coordinating Group	3622	0	0	3622
	Total	**21000**	0	2378	**18622**

Cereals Network – Status of expenditures as of August 2006

Euro 83 125 + Euro 7300 (lower priority crops) + Euro 1000 (Phase VI module funds) = Euro 91 425

Year	Activity	Budget (euro)		Expenses (euro)			Balance Phase VII (euro)
		Cereals Network budget	Other budgets[1]	Expenditures 2004	Expenditures 2005	Estimated expenditures 2006 (as of August)	
2004	Barley WG: *ad hoc* meeting in conjunction with the 9th International Barley Genetics Symposium, Brno, 20 June 2004	0	2000	866	0		1134
2004	*Avena* WG: *ad hoc* meeting in conjunction with the VIIth International Oat Conference (Helsinki, Finland, 17-22 July 2004)	800	0	1061			-261
2004	*Avena* WG: 1-day meeting to prepare a GENRES project proposal (3-5 participants)	2000	1000 [2)]	953			2047
2005	Wheat WG: full meeting (La Rochelle, France, 14-18 September 2005)	15000	0	0	19946		-4946
2005, 2007	*Avena* WG: Collecting wild oats in Spain, Italy & Morocco, 2 collectors, 3 weeks[3]	10000	0	0	0		10000
2005	Wheat WG: rescue collections and *ex situ* preservation of *Aegilops* from endangered wild locations in Israel	1625	0	0	0	1625	0
2006	Triticale and Rye *ad hoc* meeting in Nyon, Switzerland, 28 September	6000	0	0	0	4200	1800
2007	Barley WG: *ad hoc* technical meeting in Rome (IPGRI) or Aleppo (ICARDA) to link European Barley DB (IPK) and Barley Genetic Stocks DB (NGB) with SINGER (IPGRI) and Global Inventory of Barley Genetic Resources (ICARDA), travel for EBDB and BGS DB managers (4 days incl. travel); in connection with implementation of barley crop portal in EPGRIS2 project (if accepted)	0	3500	0			3500
2007	Cereals Network full meeting - entire Network, ca. 45 participants, 5 working days (3 days for one-day WG meetings for each WG + 2 days plenary meeting + arrival/departure)	47700	1800	0	0		49500
	Total (calculated)	83125	8300	2880	19946	5825	62774
	Grand Total:		**91425**				**62774**

2006	Cereals NCG meeting (7 members) (timing according to Table 2 of Steering Committee Report)	0	6320	0		6320	0

[1] Specific funds for lower priority groups during Phase VII (Table 2 of Izmir Report, p. 10), average 7300 euro per such group
[2] Module funds for non-EU participation in Gen Res projects (carried over from Phase VI).
[3] Exploration in Italy 2005 without costs for Cereals Network budget; Collecting in Morocco and Spain was postponed to Spring 2007 (cf. Report *Avena* WG)

Forages Network – Status of expenditures as of March 2006

Euro 27 709

Date	Activity	Budget (euro)	Expenses (euro)		Balance Phase VII
			Expenditures 2004	Expenditures 2005	
2005	Forages NCG and ECCDB meeting	6500	0	6789	-289
2007	ECP/GR Forages Working Group Meeting	17709	0	0	17709
	Report of the 9th meeting	3500	0	0	3500
	Total	**27709**	0	6789	**20920**

Note: The NCG members opted for holding a full Working Group meeting in 2007 as well as a two-day NCG meeting in 2005, extended to the forage ECCDB managers. This would mean 10 to 12 participants

Fruit Network – Revised budget for Phase VII and status of expenditures as of March 2006

Euro 83 125

Date	Activity	Budget (euro)	Expenses (euro)		Balance Phase VII
			Expenditures 2004	Expenditures 2005	
2004	*Ad hoc* meeting for EU proposal	4200		2030	2170
2006 East Malling, UK	Fruit Network: *Ad hoc* meeting on fingerprinting of *Malus, Pyrus, Prunus* and *Vitis* microsatellite markers and genotyping)	9600	0	0	9600
2005 Larnaca, Cyprus	Seventh meeting of the *Prunus* Working Group	18000		21833	-3833
2007 Gembloux, Belgium	*Ad hoc* meeting to resolve synonymy in *Malus, Pyrus, Prunus and Vitis* cultivars	9600	0	0	9600
2006-2007	Electronic publication on details of 10 microsatellites for *Prunus* and 10 for *Malus/Pyrus/Cydonia* and reference scores to aid fingerprinting	0	0	0	0
2006 (tbc)	A newsletter	0	0	0	0
2006	Network Coordinating Group	separate ECP/GR budget line			
2006	Third meeting of the *Malus/Pyrus* Working Group	18000	0	0	18000
2006	Technical leaflets showing how to score 15 useful characters in *Malus/Pyrus*	1125	0	0	1125
2007	Meeting of the four database managers (*Malus, Prunus, Pyrus* and *Vitis*)	3200			3200
2007	Newsletter	0	0	0	0
2008 Dresden, Germany (tbc)	Fruit Network *ad hoc* meeting on *in situ* and on-farm conservation of *Malus/Pyrus, Prunus* and *Vitis*	10400	0	0	10400
2008	Printed catalogues of the various crops	4000	0	0	4000
(tbc)	Laboratory production of microsatellite fingerprints of five cultivars from each of 25 countries	3000	0	0	3000
(tbc)	Training of staff in molecular techniques	if available			
(tbc)	Technical leaflets with protocols for *in situ* and on-farm conservation	2000	0	0	2000
Total		**83125**	**0**	**23863**	**59262**

The *Vitis* WGs will make use of the lower priority funds budget line, consisting of approximately 7300 euro, to organize small meetings or to carry out other actions.

(tbc = to be confirmed)

Oil and Protein Crops Network – Revised budget for Phase VII and status of estimated expenditures as of March 2006

Euro 27 709 + US$ 5819 (Phase VI)

Date	**Activity**	**Budget (euro)**	**Expenses (euro)**		**Balance Phase VII**
			Expenditures 2004	**Expenditures 2005**	
September 2005	*Ad hoc* meeting on regeneration methods for Grain Legume genetic resources (15 experts) (Valladolid, Spain)	9000	0	6853	2147
		US$ 5819 (Phase VI)	0	$5819	0
2007	4th meeting of the Grain Legumes Working Group	18700	0	0	18700
Total		**27700**		**euro 6853 and US$ 5819**	**20847**
		(+US$ 5819)			

Sugar, Starch and Fibre Crops Network – Revised budget for Phase VII and status of estimated expenditures as of March 2006

Euro 83 125+ 7300 lower priority budget

Date	Activity	Estimated budget (euro)	Expenses (euro)				Balance Phase VII
			Expenditures 2004	Expenditures 2005	Estimated expenditures 2006	Estimated expenditures 2007/2008	
2006	*Beta* WG meeting, Spain, 2006 (3-day meeting)	11500	0	0	11500	0	0
2006	*Beta* report	4000	0	0		4000	0
2006	Beta *in situ*-assessment day in connection with the *Beta* WG meeting, Canary Islands, Spain – 2006	3600	0	0	3040	0	560
2006	*Beta* WG subcoordinators *ad hoc* meeting back to the NCG meeting in 2006 (changed into *Beta in situ* management descriptors and data model meeting)	2000	0	0	2000	0	0
2006	Potato WG meeting, UK, late 2006 (only 1 day)	11600	0	0	11600	0	0
2006	Fibre crops (flax and hemp) WG meeting, (3-day meeting)	16500	0	0	16500	0	0
2005	Network Database managers meeting at Braunschweig: 4 persons x three days	3600	0	665	0	0	2935
2007	Flax and hemp report	4000	0	0	0	4000	0
2007	Employment of a scientist by the Network (flax DB project)	33600	0	0	0	38800	-5200
	Total	**90400**	**0**	**665**	**48640**	**42800**	**-1705**

Vegetables, Medicinal and Aromatic Plants Network - Status of expenditures as of March 2006

Euro 193 957

Date	Activity	Budget (euro)	Expenses (euro)			Balance Phase VII
			Expenditures 2004	Expenditures 2005	Estimated expenditures 2006 (as of March)	
2004	2nd meeting of the MAP WG	16000	18625	-1498	0	-1127
2005	1st meeting of the Cucurbits WG	16000	0	7383		8617
2005	1st meeting of the Leafy Vegetables WG	16000	0	4725		11275
2006	1st meeting of the Umbellifer Crops WG	16000	0	0		16000
2007	Vegetables and MAP Network meeting (all 7 WGs)	80000	0	0		80000
	5 meeting reports	20000	0	0		20000
	Reserve funds for priority groups (EU project preparatory meetings, data or sample acquisition, public awareness actions)	30000	0	573		29427
	Total	**194000**	18625	11184	0	**164191**

Brassica, *Allium* and Solanaceae WGs will make use of the **lower priority funds** budget line, consisting of approximately 7300 euro per group, to organize small meetings or to carry out other actions.

2006	***Brassica and Allium*** - *Ad hoc* ECP/GR meeting on European collection of *Brassica* and *Allium*	14600			9140	5460
2006	**Solanaceae** - Turkey mission (Pepper database)	7300			1700	5600

In situ and On-farm Conservation Network – Proposed budget for Phase VIII

Date	Activity	Budget (euro)
Wild Species Conservation in Genetic Reserves Task Force		
Sep. 10	Publication of genetic reserve case study (e.g. *Vitis*) Technical Bulletin with *Vitis* Working Group	6000
Sep. 09	Two issues of Crop Wild Relative	5000
Sep. 10	Meeting 1	6000
Sep. 12	Meeting 2	10000
On-farm Conservation and Management Task Force		
Sep. 09	Publication of newsletter on on-farm conservation (two issues)	5000
Jun. 09	On-farm subgroup meeting 1	12000
Sep. 11	On-farm subgroup meeting 2	12000
	Publication case study	6000
Thematic cross-cutting issues		
Sep. 09	Joint *In Situ* / Crop Network meeting	20000
Sep. 12	Public awareness brochure for LRs conservation and use	6000
Sep. 12	Public awareness brochure for CWRs conservation and use	6000
	Total	**94000**

Documentation and Information Network – Proposed budget for Phase VIII

Euro 42 353 + Euro 50 000 (EURISCO Budget)

Date	Activity	ECP/GR contribution (euro)	Expenses (euro)		
					Balance Phase VIII
Part A: Meetings					
(Such meetings should ideally be organized "back-to-back" with other meetings in such a way as to exploit maximum synergies)					
2009	NCG-Meeting (perhaps together with EURISCO Advisory Group, depending on available funds)	5000	0	0	5000
2009 or 2010	Training/meeting of National Inventory Focal Points (NFP/NI); (on a self-financing basis; limited support upon request if justified)	5000	0	0	5000
2011	NCG Meeting together with EURISCO Advisory Group	7353	0	0	7353
2013	Full Network Meeting (NFP/NI, ECCDB managers, EURISCO Advisory Group, NCG)	10000	0	0	10000
Part B: Projects					
	Limited support to highly-relevant D&I Network-related activities upon request and in selected cases to be approved by the D&I Network- coordinating group	15000	0	0	15000
	Total	**42353**	0	0	42353
	Part C: EURISCO				
Future maintenance and selected development activities to be funded through specific ECP/GR budget line "EURISCO"		**50000**	0	0	50000

Cereals Network – Proposed budget for Phase VIII

Year	Activity	Budget (euro)
2009	*Avena* WG: Full meeting	20000
2009	Barley WG: Full meeting	20000
2009	Wheat WG: Full meeting	20000
2010	Triticale and Rye *ad hoc* meeting	8000
2011 (first half)	Cereals NCG meeting (7 members)	6000
2012	Cereals Network full meeting - entire Network, ca. 45 participants, 5 working days (3 days for one-day WG meetings for each WG + 2 days plenary meeting + arrival/departure)	60000
2009-2013	Specific activities on request by working groups, to be specified later	5000
	Total (calculated)	**139000**

Forages Network – Proposed budget for Phase VIII

Activity	**Budget (euro)**
One full Working Group meeting	20000
Two NCG meetings including DB managers	14000
Three *ad hoc* meetings with experts (portals, molecular, *in situ*)	10000
Total	**44000**

Sugar, Starch and Fibre Crops Network – Proposed budget for Phase VIII

Activity	Estimated cost (euro)
1. Working group meetings including publication of reports	
Beta: 1500 € to facilitate participation of non-European expert (e.g. Asia) included	17500
Potato	16000
Flax and Hemp combined with NCG meeting	18000
2. *Ad hoc* meetings on various issues	
Three working groups x 2000 €	6000
3. Actions	
Beta: Uploading of C&E data from VIR, and other collections. We would like to apply for a small ECP/GR project such as we had in the past for garden beet evaluation with the Czech Republic, Poland and Russia	3000
Beta: Monitoring of genetic reserves (*Beta*). Travel cost reimbursement for local experts.	2000
Preparation of MAS of Garden and Leaf Beet accession suited as conservation varieties, perhaps in cooperation with the Vegetables Network or with NGOs. Funded as small ECP/GR project.	5000
Preparation of MAS for obsolete potato varieties suited as conservation varieties (genetic fingerprinting: 5000 €, virus eradication: 10000 €). Specific priorities will be determined at the WG meeting, perhaps in cooperation with NGOs. The work could be advertised within the ECP/GR to make the best possible use of the available funds.	15000
Total budget	**82500**

Appendix III. Acronyms and abbreviations

AEGIS	A European Genebank Integrated System
AEGRO	An Integrated European *In situ* Management Workplan: Implementing Genetic Reserves and On Farm Concepts *(project submitted under Council Regulation (EC) 870/2004)*
AEP	Association Européenne de recherche sur les Protéagineux (European Association for Grain Legume Research), Paris, France
ARS	Agricultural Research Service *(USDA)*
ATFCC-AUS	Australian Temperate Field Crops Collection
ATSAF	Arbeitsgemeinschaft für Tropische und Subtropische Agrarforschung (Council for Agricultural Research in the Tropics and Subtropics), Germany
BAZ	Bundesanstalt für Züchtungsforschung an Kulturpflanzen (Federal Centre for Breeding Research on Cultivated Plants), Germany
BLE	Bundesanstalt für Landwirtschaft und Ernährung, (Federal Agency for Agriculture and Food), Germany
BMELV	Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz (Federal Ministry of Food, Agriculture and Consumer Protection), Germany
BÖLW	Bund Ökologische Lebensmittelwirtschaft (Federation of the Organic Food Industry), Germany
CBD	Convention on Biological Diversity
CCDB	Central Crop Database
CGIAR	Consultative Group on International Agricultural Research
CHM	Clearing House Mechanism *(of the CBD)*
CIMMYT	Centro Internacional de Mejoramiento de Maíz y Trigo (International Wheat and Maize Improvement Center), Mexico *(CGIAR)*
CWANA	Central West Asia and North Africa
CWR	Crop wild relative
CWRIS	Crop Wild Relative Information System
DB	Database
DBM	Database manager
EADB	European *Allium* Database
EAFRD	European Agricultural Fund for Rural Development
EAPGREN	Eastern Africa Plant Genetic Resources Network
ECCDB	European Central Crop Database
ECP/GR	European Cooperative Programme for Crop Genetic Resources Networks
EGRISI	European Genetic Resources *In Situ* Inventory *(project submitted under Council Regulation (EC) 870/2004)*
EPCS	European Plant Conservation Strategy
EPGRIS	European Plant Genetic Resources Information Infra-Structure
ESA	European Seed Association
EU	European Union
EURISCO	European Plant Genetic Resources Search Catalogue
FAL	Bundesforschungsanstalt für Landwirtschaft (Federal Agricultural Research Centre), Braunschweig, Germany
FAO	Food and Agriculture Organization of the United Nations, Rome, Italy
GBIF	Global Biodiversity Information Facility
GEF	Global Environment Facility
GFP	Gemeinschaft zur Förderung der privaten deutschen Pflanzenzüchtung (Society for advancement of private German plant breeding), Germany
GIS	Geographical information system

GPA	Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture
GPZ	Gesellschaft für Pflanzenzüchtung (Plant Breeding Society), Germany
GRENEWECA	Genetic Resources Network for West and Central Africa
GRPI	Genetic Resources Policy Initiative
GSPC	Global Strategy for Plant Conservation
GTZ	Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation), Germany
IBV	Information and Coordination Centre for Biological Diversity, Bonn, Germany
ICARDA	International Center for Agricultural Research in the Dry Areas, Aleppo, Syria *(CGIAR)*
IDBB	International Database for *Beta*
IOZ	Institut für Obstzüchtung (Institute of Fruit Breeding), Dresden–Pillnitz, Germany
IPK	Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany
IRRI	International Rice Research Institute, Manila, Philippines *(CGIAR)*
IRZ	Institut für Rebenzüchtung (Institute of Grapevine Breeding), Siebeldingen, Germany
ISM	*In situ* management
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
Kern	Kulturpflanzen erhalten, rekultivieren und nutzen (Network for the Conservation, Recultivation and Utilization of Crop Diversity), Germany
MAP	Medicinal and aromatic plants
MAS	Most appropriate sample
MCPD	Multi-crop Passport Descriptors *(FAO/IPGRI)*
MLS	Multilateral System of Access and Benefit-sharing
MOS	Most original sample
MTA	Material Transfer Agreement
NCG	Network Coordinating Group *(ECP/GR)*
NFP	National Focal Point *(EURISCO)*
NGB	Nordic Gene Bank, Alnarp, Sweden
NGO	Non-governmental organization
NI	National Inventory *(EURISCO)*
ONFARMSAFE	On-Farm Safeguard of Plant Genetic Resources *(project submitted under Council Regulation (EC) 870/2004)*
PGR	Plant genetic resources
PGRFA	Plant genetic resources for food and agriculture
SASA	Scottish Agricultural Science Agency
SEBI 2010	Streamlining European Biodiversity Indicators 2010 project
SEEDNet	South East Europe Development Network on Plant Genetic Resources
SINGER	System-wide Information Network for Genetic Resources *(CGIAR)*
sMTA	Standard Material Transfer Agreement
UNEP	United Nations Environment Programme
UPOV	Union internationale pour la protection des obtentions végétales (International Union for the Protection of New Varieties of Plants), Geneva, Switzerland
USDA	United States Department of Agriculture
VEGMAPNET	Vegetables, Medicinal and Aromatic Plants Network *(ECP/GR)*
VIR	N.I. Vavilov Research Institute of Plant Industry, St. Petersburg, Russian Federation
VLK	Verband der Landwirtschaftskammern (Association of Chambers of Agriculture), Germany
WBN	World *Beta* Network
WG	Working Group

Appendix IV. Agenda

Meeting of the ECP/GR Network Coordinating Groups, Phase VII
29-31 March 2006, Bonn, Germany

Tuesday 28 March 2006

Arrival of participants

Wednesday 29 March 2006

Chair of the morning session: Ken Tobutt

8:30-9:10 **Plenary session - Introduction**

10′ Introductory welcome from local host (*IBV*)
10′ Presentation of the agenda and adjustments (*Chair*)
10′ Self-introduction of participants (name, affiliation/position and role in the Network)
10′ Briefing on ECP/GR Phase VII (*L. Maggioni*)

9:10-10:30 **Changes in the operating environment**

20′ International Treaty (*J. Engels*)
10′ Update on standard MTA negotiation process (*F. Begemann*)
20′ European Information System – EURISCO (*S. Dias*)
20′ European Seed Association (*G. Kley)*
10′ *Discussion*

10:30-11:00 ***Coffee break***

11:00-12:40 **Network cross-cutting issues**

10′ Introduction to cross-cutting issues, including terms of reference of NCGs (*L. Maggioni*)
20′ Documentation issues (CCDBs and their relationship with EURISCO; The *in situ*
Discussion component; The workshop "Inventorying European Cultivated Plant Species";
10′ The new EU project(s)) (*Introduced by F. Begemann*)
10′ Suggested elements to link *In situ*/On-farm Network and Crop Networks
Discussion activities (*Introduced by N. Maxted and V. Negri*), followed by a discussion with
20′ inputs from the Crop Networks on their needs/requirements
20′ Inter-regional Cooperation (*Introduced by L. Dotlačil)*
Discussion
10′

12:40-14:00 ***Lunch***

Chair of the afternoon session: Frank Begemann

14:00-15:15 **Network cross-cutting issues (cont.)**

25′ Suggested elements to link Network operations to national programmes (*S. Harrer and F. Begemann)*
25′ AEGIS project (*B. Lund)*
25′ AEGIS Vision for the future (*G. Kleijer, D. Astley and B. Lund*)

15:15-16:00 ***Coffee break***

16:00-18:00 **Network cross-cutting issues (cont.)**

30′ Lessons learnt and future mode of operation of ECP/GR *(Introduced by B. Visser*)
1h 30′ *Discussion*

Thursday 30 March 2006

Chair: Lorenzo Maggioni

8:30-9:00	**Global Crop Diversity Trust**
20′	Update on the Global Crop Diversity Trust and crop strategies (*B. Laliberté*)
Discussion 10′	
9:00-10:30	**Parallel Sessions – Network-specific issues** Each Network's specific agenda *- Identify chairman and rapporteur for each NCG session, to take notes and prepare recommendations during afternoon, so that they can be discussed and agreed in the plenary session next morning -*
10:30-11:00	***Coffee break***
11:00-12:30	**Parallel Sessions continued - Network-specific issues** Status Quo and assessment of progress
12:30-14:00	***Lunch***
14:00-15:30	**Parallel Sessions continued – Network-specific issues** Suggestions for updating the Workplan of Phase VII (2006-2008)
15:30-16:00	***Coffee break***
16:00-17:30	Suggestions for planning and prioritizing Phase VIII (2009-2013) – for consideration of the Steering Committee meeting in September 2006
	Social dinner

Friday 31 March 2006

Chair of the morning session: Marie-Christine Daunay

9:00-10:40	**Plenary session** *- Identify a small group of 3-4 people, to take notes and prepare recommendations during early afternoon, so that they can be discussed and agreed in the final wrap-up session -* Each NCG reports in plenary main items of general interest (Operational issues and strategic issues) (20′ per Network)
10:40-11:00	***Coffee break***
11:00-12:45	**Plenary session (cont.)** Each NCG reports in plenary main items of general interest (Operational issues and strategic issues) (20′ per Network)
12:45-14:00	***Lunch***
14:00-15:30	**Preparation of general recommendations (operational and strategic) for final wrap-up discussion by the group of rapporteurs**
15:30-16:00	***Coffee break***

Chair of the afternoon session: Gert Kleijer

16:00-17:30	**Presentation and discussion of results, preparation of the draft report** Wrap-up of Network cross-cutting issues and recommendations to the SC (operational and strategic)
17:30-18:00	**Closing remarks**

Saturday 1 April 2006

Departure of participants

Appendix V. List of participants

Note: Abbreviations for the various Network Coordinating Groups: [C] = Cereals; [FO] = Forages; [FR] = Fruit; [OP] = Oil and Protein Crops; [SSF] = Sugar, Starch and Fibre Crops; [VM] = Vegetables, Medicinal and Aromatic Plants; [DI] = Documentation and Information; [IS-OF] = *In situ* and on-farm conservation; [IR] = Inter-regional Cooperation

Network Coordinating Group Members

Paul Freudenthaler [IS-OF]
AGES - Austrian Agency for Health and Food Safety Ltd.
Institute for Potatoes and Plant Genetic Resources
Wieningerstrasse 8
4020 Linz
Austria
Tel: (43-732) 381261/260
Fax: (43-732) 385482
Email: paul.freudenthaler@ages.at

Marc Lateur [FR]
Dept. of Biological Control and Plant Genetic Resources
Centre de Recherches Agronomiques (CRA)
Rue de Liroux 4
5030 Gembloux
Belgium
Tel: (32) 81 620333
Fax: (32) 81 620348
Email: lateur@cra.wallonie.be

Iva Faberová [C]
Genebank Department
Research Institute of Crop Production (RICP)
Drnovská 507
161 06 Praha 6-Ruzyně
Czech Republic
Tel: (420) 233022478
Fax: (420) 233022286 (genebank)/233310636 (institute)
Email: faberova@vurv.cz

Magdalena Ševčíková [FO]
OSEVA PRO Ltd.
Grassland Research Station (GRS)
Hamerská 698
756 54 Zubří
Czech Republic
Tel: (420) 571 658195
Fax: (420) 571 658197
Email1: sevc@iol.cz
Email2: vstroz@iol.cz

Zdeněk Stehno [IS-OF]
Genebank Department
Research Institute for Crop Production (RICP)
Drnovská 507
161 06 Praha 6-Ruzyně
Czech Republic
Tel: (420) 233022364
Fax: (420) 233022286/233310636
Email: stehno@vurv.cz

Ladislav Dotlačil [IR]
Genebank Department
Research Institute for Crop Production (RICP)
Drnovská 507
161 06 Praha 6-Ruzyně 507
Czech Republic
Tel: (420) 233022364
Fax: (420) 233022286
Email: dotlacil@vurv.cz

Marja Jalli [C]
MTT Agrifood Research Finland
Plant Protection
31600 Jokioinen
Finland
Tel: (358-3) 4188 2555
Fax: (358-3) 4188 2584
Email: marja.jalli@mtt.fi

Emilie Balsemin [FR]
INRA Centre de Bordeaux-Aquitaine
UREFV
71 avenue Edouard Bourlaux
33883 Villenave d'Ornon
France
Tel: (33) 557122445
Fax: (33) 557122439
Email: emilie.balsemin@bordeaux.inra.fr

Marie-Christine Daunay [VM]
Unité de génétique et amélioration des fruits et légumes
INRA, Domaine St-Maurice
BP 94
84143 Montfavet cedex
France
Tel: (33) 432722724
Fax: (33) 432722702
Email: daunay@avignon.inra.fr

Christoph Germeier [C]
Federal Centre for Breeding Research on Cultivated Plants (BAZ) - Gene Bank
Bundesallee 50
38116 Braunschweig
Germany
Tel: (49-531) 5962459
Fax: (49-531) 5962457
Email: c.germeier@bafz.de

Frank Begemann [DI]
513 - Information and Coordination Centre for Biological Diversity (IBV)
Federal Agency for Agriculture and Food (BLE)
Deichmanns Aue 29
53179 Bonn
Germany
Tel: (49-228) 6845 3239
Fax: (49-228) 6845 3787
Email: frank.begemann@ble.de

Evelin Willner [FO]
Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) - Genebank
Außenstelle Nord
Inselstr. 9
23 999 Malchow/Poel
Germany
Tel: (49-38425) 20316
Fax: (49-38425) 429808
Email: e.willner@so.hs-wismar.de

Erika Maul [FR]
Institut für Rebenzüchtung Geilweilerhof
BAFZ
76833 Siebeldingen
Germany
Tel: (49-6345) 41122
Fax: (49-6345) 919050
Email: e.maul@bafz.de

Lothar Frese [SSF; IS-OF]
Federal Centre for Breeding Research on Cultivated Plants (BAZ)
Bundesallee 50
38116 Braunschweig
Germany
Tel: (49-531) 5962451
Fax: (49-531) 5962457
Email: l.frese@bafz.de

Joachim Keller [VM]
Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) - Genebank
Corrensstrasse 3
06466 Gatersleben
Germany
Tel: (49-39482) 5267
Fax: (49-39482) 5741
Email: keller@ipk-gatersleben.de

Andreas Katsiotis [C]
Dept. of Plant Breeding and Biometry
Agricultural University of Athens
Iera Odos 75
118 55 Athens Votanikos
Greece
Tel: (30-210) 5294634
Fax: (30-210) 5294622
Email: katsioti@aua.gr

Lajos Horváth [FO]
National Institute for Agricultural Quality Control
Research Centre for Agrobotany
Külsömezö 15
2766 Tápiószele
Hungary
Tel: (36-53) 380070/071
Fax: (36-53) 380072
Email: lhorvath@agrobot.rcat.hu

Valeria Negri [FO; IS-OF]
Genetica e Miglioramento genetico
Dipt. Biologia Vegetale & Biotech. Agroambientale
Facoltà di Agraria, Università degli Studi di Perugia
Borgo XX Giugno, 74
06100 Perugia
Italy
Tel: (39) 075-5856218
Fax: (39) 075-5856224
Email: vnegri@unipg.it

Tiberio Chiari [IR]
Istituto Agronomico per l'Oltremare
Via A. Cocchi, 4
50131 Firenze
Italy
Tel: (39) 055 5061212
Fax: (39) 055 5061333
Email: chiari@iao.florence.it

Ietje W. Boukema [VM]
Centre for Genetic Resources, the Netherlands (CGN)
Wageningen University and Research Centre
PO Box 16
6700 AA Wageningen
The Netherlands
Tel: (31-317) 477077
Fax: (31-317) 423110
Email: ietje.boukema@wur.nl

Roel Hoekstra [SSF]
Centre for Genetic Resources, the Netherlands (CGN)
PO Box 16
6700 AA Wageningen
The Netherlands
Tel: (31-317) 477077
Fax: (31-317) 423110
Email: roel.hoekstra@wur.nl

Chris Kik [FO]
Centre for Genetic Resources, the Netherlands (CGN)
PO Box 16
6700 AA Wageningen
The Netherlands
Tel: (31-317) 477011/45
Fax: (31-317) 423110
Email: chris.kik@wur.nl

Willem van Dooijeweert [VM]
Centre for Genetic Resources, the Netherlands (CGN)
Wageningen University and Research Centre
PO Box 16
6700 AA Wageningen
The Netherlands
Tel: (31-317) 477083
Fax: (31-317) 423110
Email: willem.vandooijeweert@wur.nl

Lambert Visser [IR]
Centre for Genetic Resources, the Netherlands (CGN)
Wageningen University and Research Centre
PO Box 16
6700 AA Wageningen
The Netherlands
Tel: (31-317) 477184
Fax: (31-317) 418094
Email: Bert.Visser@wur.nl

Petter Marum [FO]
Graminor AS
Bjørke Research Station
2344 Ilseng
Norway
Tel: (47) 62 555514
Fax: (47) 62 555501
Email: petter.marum@graminor.no

Stein Harald Hjeltnes [FR]
Norwegian Institute for Agricultural and Environmental Research
Bioforsk Njøs
PO Box 42
6861 Leikanger
Norway
Tel: (47-57) 656063
Fax: (47-57) 656061
Email: stein.harald.hjeltnes@bioforsk.no

Dea Baričevič [VM]
Agronomy Department - Biotechnical Faculty
University of Ljubljana
Jamnikarjeva 101
1000 Ljubljana
Slovenia
Tel: (386-1) 4231161
Fax: (386-1) 4231088
Email: dea.baricevic@bf.uni-lj.si

Jesús María Ortiz [FR]
Escuela Técnica Superior de Ingenieros Agrónomos (ETSIA)
Universidad Politécnica de Madrid
Ciudad Universitaria s/n
28040 Madrid
Spain
Tel: (34-91) 3365658
Fax: (34-91) 3365656
Email: jesusmaria.ortizm@upm.es

José María Iriondo Alegría [IS-OF]
Dpto. de Biología Vegetal, EUIT Agricola
Universidad Politécnica de Madrid
Ciudad Universitaria s/n.
28040 Madrid
Spain
Tel: (34-91) 3365435
Fax: (34-91) 3365406
Email: jose.iriondo@upm.es

Maria José Díez Niclós [VM]
Biotechnology Department
Universidad Politécnica de Valencia
Camino de Vera S/N
46022 Valencia
Spain
Tel: (34-963) 879421
Fax: (34-963) 879422
Email: mdiezni@btc.upv.es

Beat Boller [FO]
Eidgenössische Forschungsanstalt für Agrarökologie und Landbau
Reckenholzstr. 191
8046 Zurich
Switzerland
Tel: (41-1) 3777363
Fax: (41-1) 3777201
Email: beat.boller@fal.admin.ch

Gert Kleijer [C]
Ressources Génétiques/Qualité
Agroscope Changins-Wädenswil
Station Fédérale de Recherches Agronomiques de Changins
Case postale 1012
1260 Nyon 1
Switzerland
Tel: (41-22) 3634444/4726 (dir)
Fax: (41-22) 3634690
Email: geert.kleijer@acw.admin.ch

Dave Astley [VM]
Genetic Resources Unit
Warwick HRI
Wellesbourne, Warwick CV35 9EF
United Kingdom
Tel: (44-24) 7657 5014
Fax: (44-24) 7657 4500
Email: dave.astley@warwick.ac.uk

Emma-Jane Allen [FR]
National Fruit Collections
Imperial College
Brogdale Road
ME13 8X2 Faversham, Kent
United Kingdom
Tel: (44-1795) 590272
Email: e.lamont@imperial.ac.uk

Nigel Maxted [IS-OF]
School of Biosciences
University of Birmingham
Edgbaston
Birmingham B15 2TT
United Kingdom
Tel: (44-121) 4145571
Fax: (44-121) 4145925
Email1: N.Maxted@bham.ac.uk
Email2: nigel.maxted@dial.pipex.com

Ian D. Thomas [DI]
Institute of Grassland and Environmental Research (IGER)
Plas Gogerddan
Aberystwyth, Ceredigion SY23 3EB
United Kingdom
Tel: (44-1970) 823 226
Fax: (44-1970) 823 243
Email: ian.thomas@bbsrc.ac.uk

Kenneth Tobutt [FR]
East Malling Research
New Road
East Malling, Kent ME19 6BJ
United Kingdom
Tel: (44-1732) 843833
Fax: (44-1732) 849067
Email1: angela.chapple@emr.ac.uk
Email2: ken.tobutt@emr.ac.uk

Observers

Lene Krøl Christensen
Nordic Gene Bank
PO Box 41
23053 Alnarp
Sweden
Tel: (46-40) 536646
Fax: (46-40) 536650
Email1: lene@ngb.se
Email2: lene.k.christensen@ngb.se

Gisbert Kley
European Seed Association (ESA)
rue du Luxembourg 23/15
1000 Brussels
Belgium
Tel: (32) (0)2 743 28 60
Fax: (32) (0)2 743 28 69
Email1: vonessen@euroseeds.org
Email2: gekley@t-online.de

Robert Oger
Centre de Recherches Agronomiques (CRA)
Rue de Liroux, 9
5030 Gembloux
Belgium
Tel: (32-81) 626578
Fax: (32-81) 626559
Email: oger@cra.wallonie.be

Siegfried Harrer
513 - Information and Coordination Centre for Biological Diversity (IBV)
Federal Agency for Agriculture and Food (BLE)
Deichmanns Aue 29
53179 Bonn
Germany
Tel: (49-228) 6845 3240
Fax: (49-228) 6845 3787
Email: siegfried.harrer@ble.de

Brigitte Laliberté
Global Crop Diversity Trust
c/o International Plant Genetic Resources Institute
Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino)
Italy
Tel: (39) 06 6118272
Fax: (39)06 61979661
Email:b.laliberte@cgiar.org

IPGRI

Sónia Dias
Regional Office for Europe
International Plant Genetic Resources Institute (IPGR
Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino)
Italy
Tel: (39) 06 6118 204
Fax: (39) 06 61979661
Email: s.dias@cgiar.org

Jan Engels
International Plant Genetic Resources Institute (IPGRI)
Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino)
Italy
Tel: (39) 06 6118 222
Fax: (39) 06 61979661
Email: j.engels@cgiar.org

Elinor Lipman
Regional Office for Europe
International Plant Genetic Resources Institute (IPGRI)
Le Golf 2
421 rue Croix de las Cazes
34000 Montpellier
France
Tel: (33) (0) 467041303
Fax: (33) (0) 467610334
Email: e.lipman@cgiar.org

Birgitte Lund
Regional Office for Europe
International Plant Genetic Resources Institute (IPGRI)
Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino)
Italy
Email: b.lund@cgiar.org

Lorenzo Maggioni
Regional Office for Europe
International Plant Genetic Resources Institute (IPGRI)
Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino)
Italy
Tel: (39) 06 6118 231
Fax: (39) 06 61979661
Email: l.maggioni@cgiar.org

Unable to attend

Siyka Angelova [OP]
Institute of Plant Genetic Resources "K. Malkov" (IPGR)
Str. Drujba 2
4122 Sadovo, Plovdiv district
Bulgaria
Tel: (359-32) 629026
Fax: (359-32) 629026/270270 (post)
Email1: angelova@ipgr-bg.org
Email2: siika_angelova@yahoo.com

Martin Pavelek [SSF]
AGRITEC Research, Breeding and Service, Ltd.
Zemedelská Street 16
787 01 Šumperk
Czech Republic
Tel: (420) 583 382106
Fax: (420) 583 382999
Email: pavelek@agritec.cz

Bruno Desprez [SSF]
Florimond Desprez
Créations Variétales
BP 41
59242 Cappelle-en-Pévèle
France
Tel: (33) 320849490
Fax: (33) 320596601
Email: bruno.desprez@florimond-desprez.fr

Gérard Duc [OP]
Institut National de la Recherche Agronomique (INRA)
URLEG
BP 86510
21065 Dijon cedex
France
Tel: (33) 380693148
Fax: (33) 380693263
Email: duc@epoisses.inra.fr

Grégoire Thomas [VM]
Agrocampus Rennes
Institut national d'enseignement supérieur et de recherche agronomique et agroalimentaire de Rennes
65 rue de Saint Brieuc
CS 84215
35042 Rennes cedex
France
Tel: (33) 223 48 55 01
Fax: (33) 223 48 55 15
Email: gregoire.thomas@agrocampus-rennes.fr

Helmut Knüpffer [C; DI]
Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) - Genebank
Corrensstrasse 3
06466 Gatersleben
Germany
Tel: (49-39482) 5283
Fax: (49-39482) 5155
Email: knupffer@ipk-gatersleben.de

Andrea Carboni [SSF]
Istituto Sperimentale per le Colture Industriali (ISCI)
Via di Corticella, 133
40129 Bologna
Italy
Tel: (39-051) 6316832 / operator: (39-051) 6316811
Fax: (39-051) 374857
Email: a.carboni@isci.it

Theo J. L. van Hintum [DI]
Centre for Genetic Resources, the
Netherlands (CGN)
PO Box 16
67001 AA Wageningen
The Netherlands
Tel: (31-317) 477078
Fax: (31-317) 418094
Email: Theo.vanhintum@wur.nl

Wojciech Święcicki [OP]
Institute of Plant Genetics
Polish Academy of Sciences
ul. Strzeszynska 34
60479 Poznań
Poland
Tel: (48-61) 8221112/8233511
Fax: (48-61) 8233671
Email: wswi@igr.poznan.pl

Vladimir Meglič [IR]
Crop and Seed Science Department
Agricultural Institute of Slovenia
Hacquetova 17
1000 Ljubljana
Slovenia
Tel: (386-1) 2805262
Fax: (386-1) 2805255
Email: vladimir.meglic@kis.si

Eva Thörn [IR]
Swedish Biodiversity Centre
Swedish University of Agricultural Sciences
PO Box 54
230 53 Alnarp
Sweden
Tel: (46-40) 415587
Fax: (46-40) 460845
Email: eva.thorn@cbm.slu.se

Ahmet Semsettin Tan [DI]
Aegean Agricultural Research Institute
(AARI)
PO Box 9, Menemen
35661 Izmir
Turkey
Tel: (90-232) 8461331
Fax: (90-232) 8461107
Email1: etae@aari.gov.tr
Email2: webadmin@aari.gov.tr

Mike Ambrose [OP]
Department of Applied Genetics
John Innes Centre
Norwich Research Park, Colney Lane
Norwich NR4 7UH
United Kingdom
Tel: (44-1603) 450630
Fax: (44-1603) 450045
Email: mike.ambrose@bbsrc.ac.uk