National and international activities for the conservation and use of plant genetic resources

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**ECPGR** is a collaborative Programme among most European countries, aiming at ensuring the long-term conservation and facilitating the utilization of plant genetic resources in Europe.

[www.ecpgr.cgiar.org/](http://www.ecpgr.cgiar.org/)
Governance and funding

Nine Phases (1980-2018)

Member countries:
- Govern the programme through National Coordinators nominated at governmental level
- Contribute funds based on UN scale of assessment
  Annual budget ca. € 520k from 38 countries
- Implement activities as inputs-in-kind
Structure

Steering Committee

Coordinating Secretariat

Crop Working Groups

- Allium
- Avena
- Barley
- Beta
- Brassica
- Cucurbits
- Fibre Crops (Flax and Hemp)
- Forages
- Grain Legumes

Leafy Vegetables
- Malus/Pyrus
- Medicinal and Aromatic Plants
- Potato
- Prunus
- Solanaceae
- Umbellifer Crops
- Vitis
- Wheat

Thematic Working Groups

- Wild Species Conservation in Genetic Reserves
- On-farm Conservation and Management
- Documentation and Information
Steering Committee

- National Coordinators + (European Commission?)
- Observers:
  - FAO
  - EUCARPIA – Genetic Resources Section
  - European Seed Association
  - Nordic Genetic Resources Centre
  - NGO
  - Bioversity International
National, Sub-regional and Regional Programmes in Europe rationally and effectively conserve *ex situ* and *in situ* PGRFA and increase their utilization
**GPA-related objectives of ECPGR (Phase IX)**

1. **In situ conservation and management**
   - Concepts on crop wild relative (CWR) and landrace (LR) populations are implemented throughout Europe

2. **Ex situ conservation**
   - A European Genebank Integrated System (AEGIS) is operational and accessions are characterized and evaluated

3. **Sustainable use**
   - Strengthen relationship with users of germplasm

4. **Building sustainable institutional and human capacity**
   - Ensure functionality of EURISCO (data quality & quantity, including in situ and on-farm data)
   - Sustain and increase commitment and resources from governments and EC
ECPGR operates through Working Groups

- Chair + Working Group members nominated by National Coordinators
- Operation through meetings and currently small activities under ECPGR Grant Scheme

Traditional activities:
- Exchange of information and plan collaboration
- Agreement on standards, guidelines, descriptors
- Setting up databases and exchanging data
- International project preparation
- Training, capacity building
Working Groups’ responsibilities and actions

18 Crop WGs:
- Responsibility in the creation, management, monitoring and use of the European Collection (AEGIS)

2 In situ WGs (Wild crops and on-farm):
- Engaged in EC-funded projects
- Develop strategic concepts on CWR and LRs

1 Doc & Info WG:
- Engaged in the development of EURISCO and other DB
- Define standards for data exchange
- Training workshops and technical advice
1 – **In situ conservation and management**

- National and regional conservation strategy planning (checklists -> priorities -> inventories -> action plans)

- Designation and management of Most Appropriate Wild Populations (genetic diversity and traits of interest) in genetic reserves

- Lack of a EU directive on CWR and central coordination body
CWR conservation

• National checklists prepared in most countries of Europe
• Nearly always prioritized (ca. 10% of total CWRs)
• 10 National inventories with distribution range completed
• Only 5-8 partial diversity and gap analysis
• 4 National Conservation action plans (Finland, Italy, Spain, UK)

ECPGR-inspired EC-funded projects (instrumental but limited in time):
  • PGR Forum (FP5) (2003-2005)
  • PGR Secure (FP7) (2011-2014)
Regional inventory – Initial results:

- 200 species in 30 countries are of immediate priority for conservation, based on:
  - economic and food security importance
  - threat status
- Only half of the species occur in protected areas
- Less than half of the species are represented in genebank collections
On-farm conservation and management

ECPGR concept in preparation with proposed focus on:

- European Inventory of on-farm genetic diversity
- Developing indicators for monitoring diversity and threat
- Promoting good practices for on-farm management
- Concept of European agro-diversity sites
- Addressing issues of ownership, access, availability, marketing, etc.

Support from FP7 ‘PGRSecure’ and Horizon 2020 ‘Diversifood’ and ‘Traditom’: instrumental but not systematically addressing the above elements at a regional level
2. Ex situ conservation

A European Genebank Integrated System

http://aegis.cgiar.org/
• Establishment of decentralized European Collection of unique and important accessions
• MoU whereby countries commit to long-term conservation and management of European Accessions and to their availability
• Availability through sMTA, including non-Annex I material
• Quality System: agreed standards, reporting, monitoring & capacity building
• Role of Working Groups for the management of decentralized collection
AEGIS membership

34 Member countries
58 Associate Members’ Agreements

1. Albania (05 May 2009) - Associate Members
2. Austria (04 December 2012) - Associate Members
3. Azerbaijan (15 July 2009) - Associate Members
4. Belarus (01 November 2011) - Associate Members
5. Belgium (31 May 2012) - Associate Members
6. Bosnia and Herzegovina (18 May 2010)
7. Bulgaria (01 December 2009) - Associate Members
8. Croatia (01 December 2009) - Associate Members
9. Cyprus (14 September 2012) - Associate Members
10. Czech Republic (22 July 2009) - Associate Members
11. Denmark (21 February 2010) - Associate Members
12. Estonia (21 May 2009) - Associate Members
13. Finland (01 December 2009) - Associate Members
14. Georgia (17 May 2009) - Associate Members
15. Germany (04 November 2009) - Associate Members
16. Hungary (21 November 2011) - Associate Members
17. Iceland (21 October 2010) - Associate Members
18. Ireland (21 July 2009)
19. Italy (02 March 2014)
20. Latvia (31 May 2012) - Associate Members
21. Lithuania (11 October 2013)
22. Montenegro (15 December 2010)
23. Netherlands (27 May 2009) - Associate Members
24. Norway (16 August 2009) - Associate Members
25. Poland (16 May 2010) - Associate Members
26. Portugal (19 November 2009)
27. Romania (13 April 2010) - Associate Members
28. Slovakia (16 June 2009) - Associate Members
29. Slovenia (20 September 2009) - Associate Members
30. Sweden (30 May 2011) - Associate Members
31. Switzerland (26 July 2009) - Associate Members
32. Turkey (13 November 2011) - Associate Members
33. Ukraine (20 April 2009)
34. United Kingdom (17 June 2010) - Associate Members
28 686 European Accessions

1. Germany: 7904
2. The Netherlands: 5853
3. Switzerland: 4838
4. United Kingdom: 4183
5. Nordic countries: 3708
6. Czech Republic: 1222
7. Bulgaria: 261
8. Slovakia: 247
9. Romania: 196
10. Poland: 152
11. Croatia: 90
12. Estonia: 15
13. Latvia: 9
14. Albania: 8
So far missed opportunity for a role of the EC:

- Four project proposals not funded (Gen Res - FP7 - H2020)
- Lack of support for the AEGIS process
- Lack of common legislative framework empowering the European genebanks in their role to conserve and provide access to European genetic resources
3. Sustainable use

- Aim to improve partnerships between genebanks and users
- Expanded characterization and evaluation of PGRFA as part of the AEGIS process
- Increased availability of data through ECPGR databases
- Expanded scope of MLS = increased access as part of AEGIS
- Promote use as part of On-farm concept
4. Building sustainable institutional and human capacity

- Strengthening National Programmes: empowering National Coordinators, Focal Points and Working Group members
- Promoting and strengthening networks
- Constructing and strengthening comprehensive information system → EURISCO
- Developing monitoring system of genetic diversity → see on-farm concept
- Building human capacity → Long record of training workshops
- Secure sustainable funding from governments and the EC
Documentation system

Online catalogue, with information on the European \textit{ex situ} collections: passport and soon C&E data

http://eurisco.ecpgr.org
• Started with EC funded “EPGRIS” (5FP 2000-2003)
• ECPGR-governed, managed by IPK, Gatersleben
• Data gathered from 43 national inventories
• 1.8 M accession data from > 300 institutions throughout Europe
• Larger data provider to Genesys and the Global Information System
• Register for MLS (365k) and AEGIS (28.6k) European accessions
• Plans to include in situ data
Conclusion-1

ECPGR comparative advantage

- ECPGR is a pan-European platform contributing to the implementation of the GPA and in line with the International Treaty

- With governmental leadership and funding, ECPGR enables:
  - Formalized cooperation across > 40 countries
  - Network of technical expertise (21 Working Groups)
  - Regional documentation infrastructure (EURISCO)
  - Regional conservation infrastructure (AEGIS)
  - Concepts and strategies (in situ CWR and on-farm landraces)
Conclusion - 2 Opportunities

ECPGR welcomes and invites stronger (formalized) collaboration with the European Commission:

Options / Scenarios for consideration:

• EC to become a formal member of ECPGR
• ECPGR to help the EC to develop a European Strategy on PGRFA
• EC to adopt EURISCO and AEGIS as EU-funded infrastructures
• ECPGR to act as EU technical Secretariat for coordination of PGRFA matters and/or for project administration
Thank you for your attention!

European Accession VIT0035, ‘Kraljevina’, Croatia