

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

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ECPGR Secretary

# What is ECPGR

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)

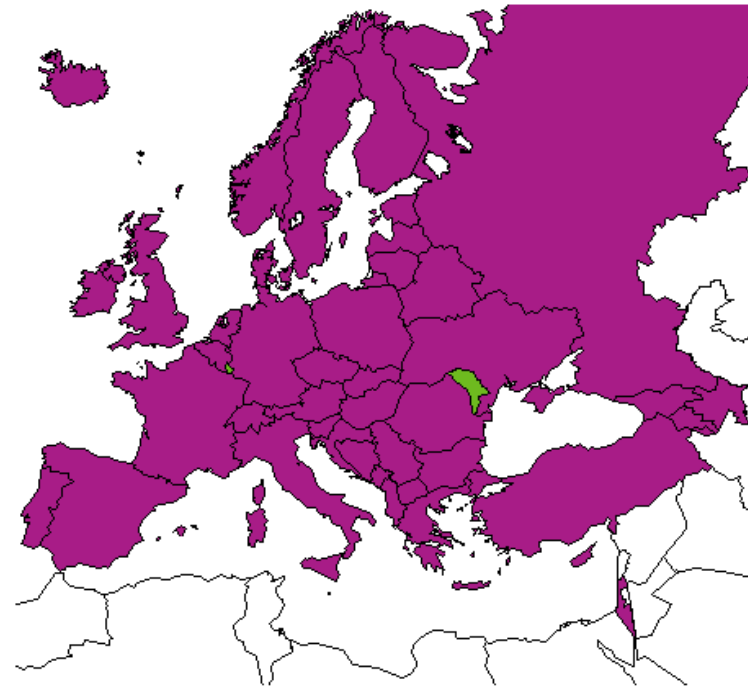
Member countries:

- Govern the programme through National Coordinators nominated at governmental level

- Contribute funds based on UN scale of assessment

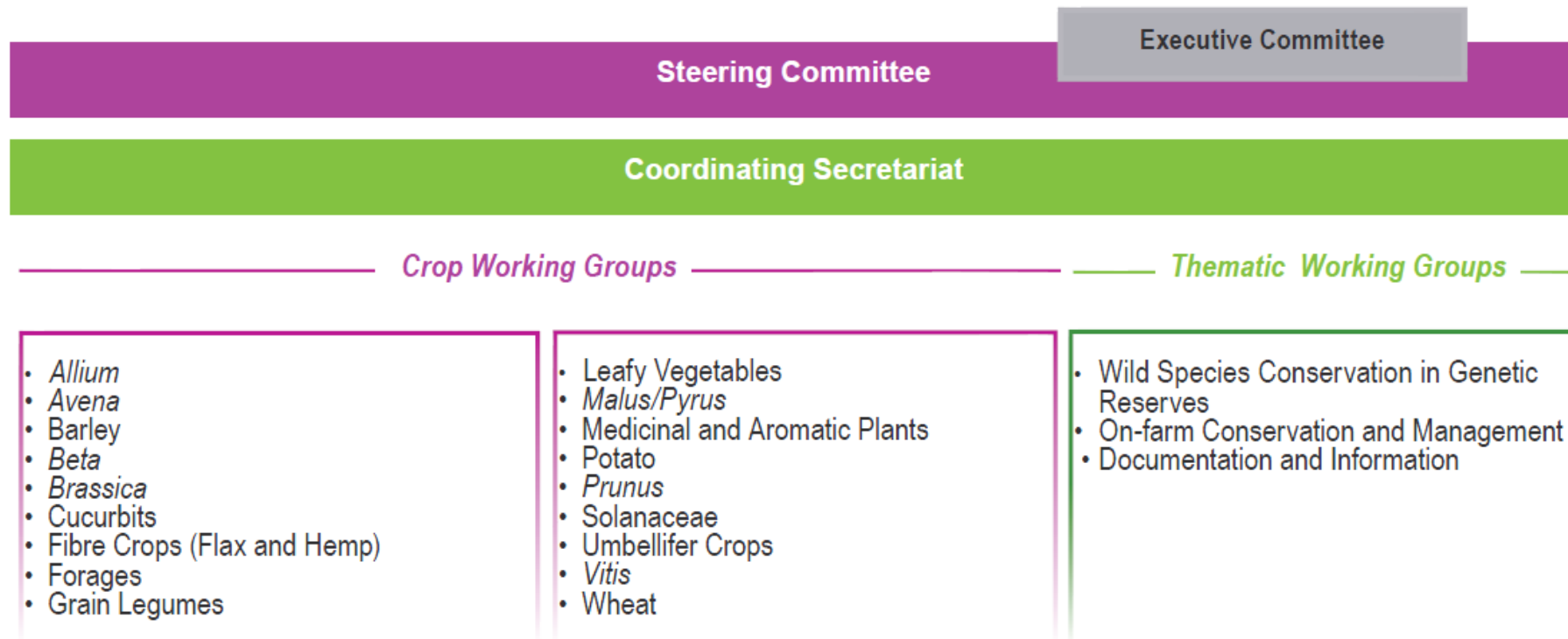
Annual budget ca. € 520k from 38 countries

- Implement activities as inputs-in-kind



**Legend**  
■ ECPGR Member countries

# Structure



# Steering Committee

- ☐ National Coordinators + (European Commission?)
- ☐ Observers:
  - FAO
  - EUCARPIA – Genetic Resources Section
  - European Seed Association
  - Nordic Genetic Resources Centre
  - NGO
  - Bioversity International

# ECPGR long-term goal

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



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

Nigel Maxted, Alvina Avagyan, Lothar Frese, José Iriondo,  
Joana Magos Brehm, Alon Singer and Shelagh Kell

Endorsed by the ECPGR Steering Committee in March 2015



# 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)
- AEGRO (870/2004) (2007-2010)
- PGR Secure (FP7) (2011-2014)

# CWR conservation

## 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

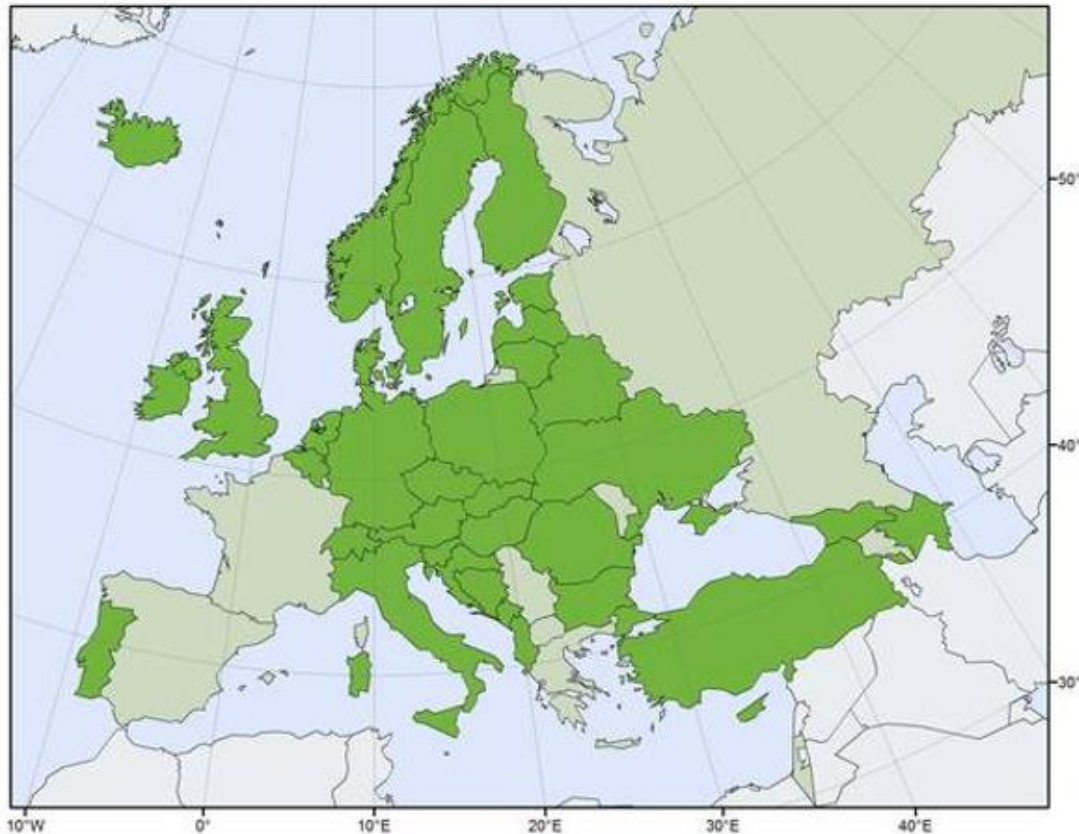
<http://aegis.cgiar.org/>

# AEGIS

- 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

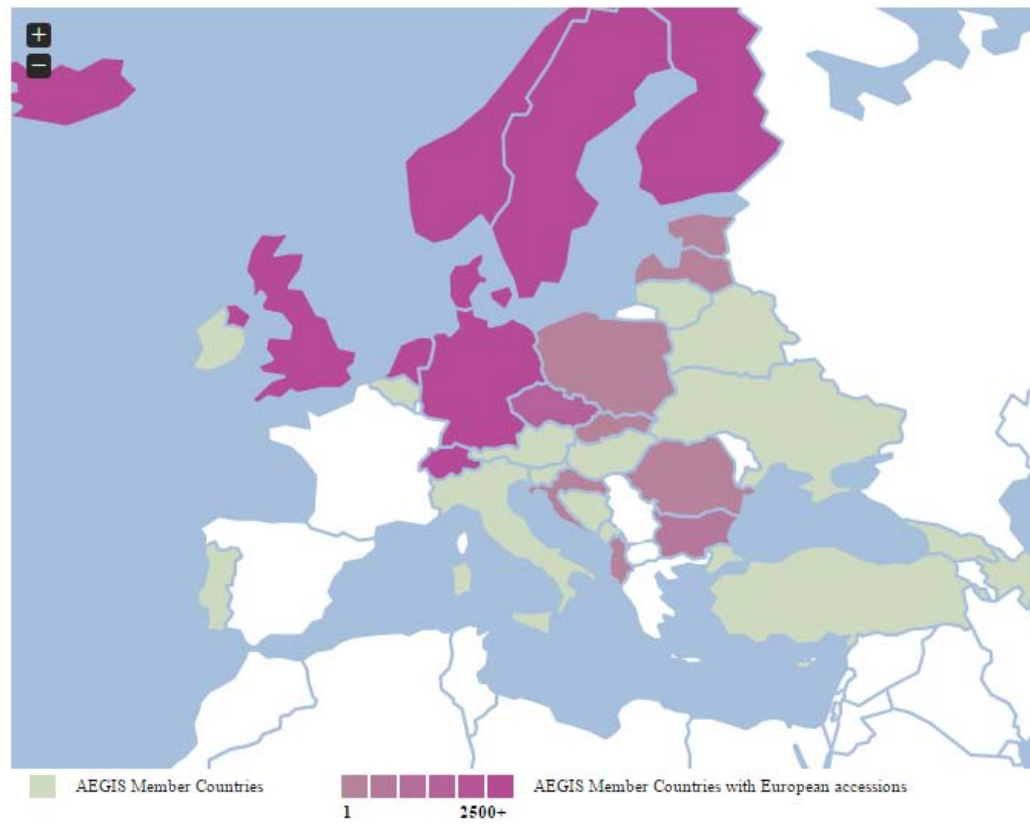
1. **Albania** (05 May 2009) - Associate Members
2. **Austria** (04 December 2012) - Associate Members
3. **Azerbaijan** (15 July 2009) - Associate Members
4. **Belarus** (01 November 2011) - Associate Members
5. **Belgium** (31 May 2012) - Associate Members
6. **Bosnia and Herzegovina** (18 May 2010)
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 2010)
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** (29 April 2009)
34. **United Kingdom** (17 June 2010) - Associate Members



# The European Collection

(April 2016)

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

# Ex situ conservation (AEGIS)

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 *ex situ* collections: passport and soon C&E data



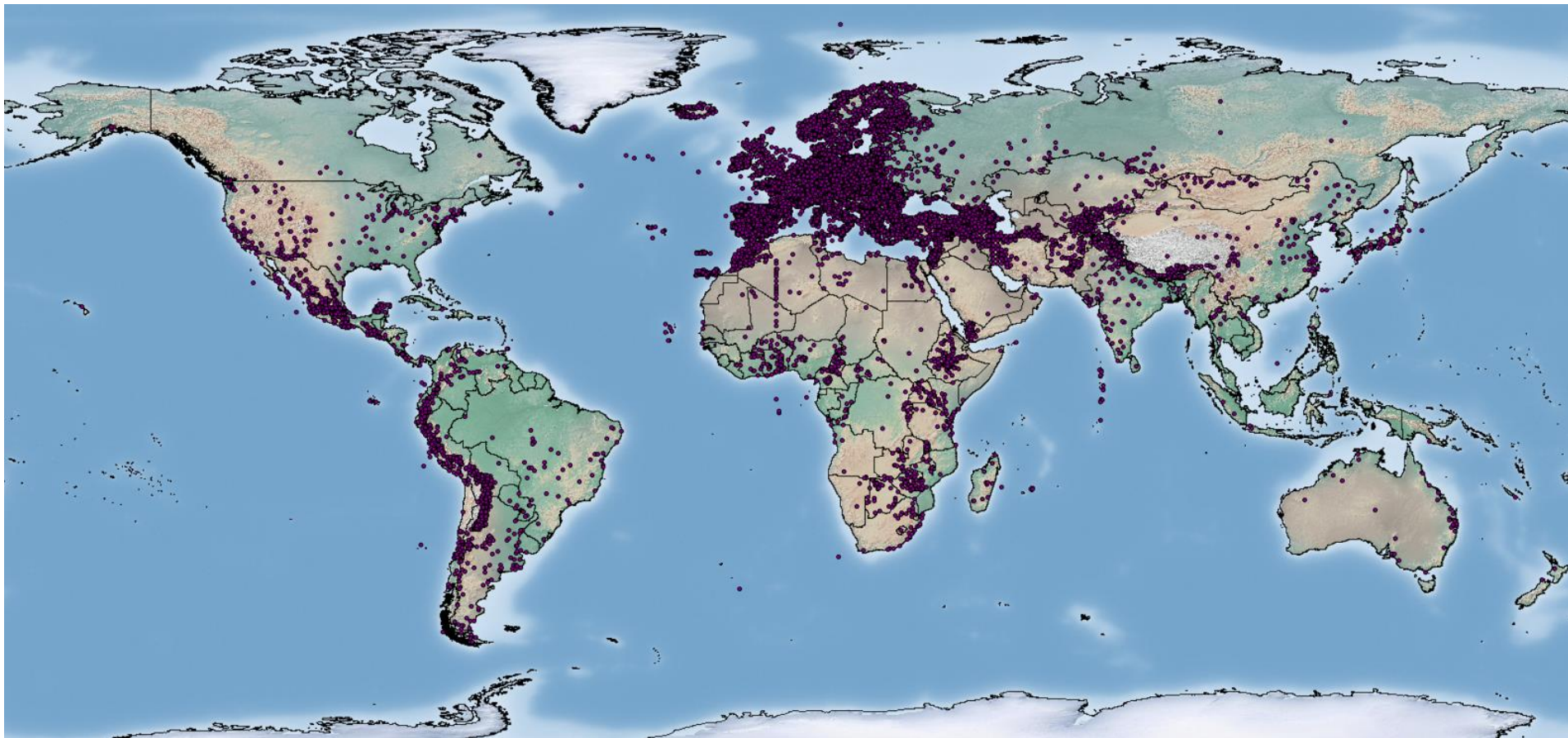
**<http://eurisco.ecpgr.org>**



- 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



# Regions of origin of accessions in EURISCO



# 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